

National Environmental Education Network Meeting 13, 7 December 2007 - Member Updates

The following updates were provided by members of the National Environmental Education Network prior to Meeting 13, 7 December 2007.

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State: Australian Government

Department: Department of the Environment and Water Resources

Schools Sector:

Sustainable Schools Initiative

The Australian Government has provided funding support to South Australia, ACT, NT and Tasmania in order to expand and consolidate AuSSI in 2007-08. The Centre for Education and Research in Environmental Strategies in Victoria (CERES) and Sandhurst Catholic Education Office also received grants in order to develop a Carbon Sink Schools programme and to modify the document 'On Holy Ground' for the Victorian context.

The final stages of the CEE '*Global Communities for Sustainability*' project, where 13 high schools from across NSW carried out sustainability initiatives in their local community in partnership with 13 school-communities in Gujarat, India has been completed. Two students and a teacher from Monaro High School were selected to represent the collective of schools in India in November 2007 and engage in cross cultural learning at the Fourth International Conference on Environmental Education in Ahmedabad India 24-28 November 2007.

New Initiatives

The Green Vouchers for Schools Programme

Green Vouchers for Schools is a \$336 million programme which provides Australian primary and secondary schools with up to \$50,000 to install rainwater tanks and/or a solar hot water system. The programme, which will run from 2007 to 2011, has so far received 1850 registration requests from both government and non-government schools since the process opened on 4 October 2007.

Continuing Initiatives

Australian Government Solar Rebates

Schools can continue to access support for the installation of solar panels to bring their electricity costs down, as well as contribute to reducing greenhouse gas emissions through the Australian Government's \$150 million solar power update. See <http://www.greenhouse.gov.au/renewable/pv/index.html>

TravelSmart

The TravelSmart Australia initiative managed by the Australian Greenhouse Office within the Department of the Environment and Water Resources continues to aim to limit travel related greenhouse gas emissions by reducing passenger transport demand and encouraging the uptake of zero and low emission transport options. The initiative includes: a national website with a range of information, tools and resources; collaborative projects with state and local governments to implement a wide range of approaches promoting active transport activities

(including the Walking School Bus and cycling proficiency training), infrastructure support (such as increasing walking and cycling tracks, provision of bike racks and end of trip facilities) and investigating broader travel demand management policies and approaches (including parking and congestion pricing as well as employer and location strategies).

Community Water Grants

The Australian Government's Community Water Grants programme offers grants to help local community organisations save recycle or improve the health of their local water resources. Under Round 3 of Community Water Grants, 4661 projects have received funding, with 50% being schools.

Research (New/Upcoming/Update on existing research)

Mainstreaming of Sustainability within Teacher Education in Australia

The Australian Research Institute in Education for Sustainability (ARIES) is undertaking this project, which will implement the results of their review of models for incorporating sustainability in professional development in pre-service teacher education. The approach is being piloted within selected jurisdictions. The project will implement a whole-of-system approach to change, as advocated in the National Environmental Education Statement for Australian Schools, through:

- aligning key stakeholders in their efforts;
- engaging and developing the capacity of key agents of change at each level in the teacher education system; and
- providing support processes and networks to address structural change.

Further and Higher Education Sector

Research (New/Upcoming/Update on existing research)

Partnering Business Schools and Corporations - ARIES has commenced a project to create change for sustainability in the learning and teaching focus of Australian business schools and in corporate activities by developing and strengthening partnerships between business schools and corporations. Collaboration will occur between and among business schools and corporations using partnerships, mentoring, work placements and a community of practice.

Education for Climate Change Adaptation in the Built Environment Sector

ARIES engaged with professional accrediting institutions in the fields of engineering, planning, landscape architecture and architecture to investigate opportunities to strengthen professional education in climate change adaptation. The project report is available at: <http://www.aries.mq.edu.au/project.htm>

A direct outcome of the project has been the recent announcement by the Australian Government Minister for the Environment, Malcolm Turnbull, of a \$2 million grants program to facilitate the integration of climate change adaptation into education and training for professionals. The grants program will be administered by the Australian Greenhouse Office. Applications for grants close on 3 December 2007. More details are available at:

<http://www.greenhouse.gov.au/impacts/about.html#professionals>

Business and Industry:

Research (New/Upcoming/Update on existing research)

Sustainability in Supply Chains - This ARIES project aims to achieve environmental improvements and general sustainability gains in supply chain companies and operations via learning based change. The project will recruit Australian-based organisations, in two industry clusters (construction and food industry), that are receptive to making sustainability improvements and can exert a significant effect through their supply chain position, influence and reach.

Community sector:

Research (New/Upcoming/Update on existing research)

Air Quality Education: Effective Programs – This ARIES project reviewed air quality community education programs from Australia and overseas to identify the critical success factors that improve the effectiveness and outcomes of such programs. A summary brochure, as well as the full report, is now available on the ARIES website: <http://www.aries.mq.edu.au/project.htm>

Noosa Shire Case Study - ARIES has prepared a case study on Noosa Shire as an example of sustainability in action, focusing on the role of education, as well as the other factors that have led to the Noosa Council's and community's approach. The case study is available at: <http://www.aries.mq.edu.au/project.htm>

Other:

Continuing Initiatives

Development of a new National Action Plan for Education for Sustainability

The scoping and consultation phases of this project are complete and the plan is currently in the final drafting stages. Input and comments from the consultation have been incorporated into the draft. The plan is expected to be finalised in 2008.

International

A presentation on Australia's approach to education for sustainability, with a particular focus on AuSSI, was made at the Australian Embassy in Tokyo on 28 June 07. The seminar was organised by the Australia Japan Foundation and explored synergies between Australia and Japan on school based sustainability initiatives.

Australia's approach to education for sustainability in Vocational Education and Training was also presented at an international consultation on education for sustainable development organised by UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training in August 2007. The consultations considered how to strengthen VET's contribution to Sustainable Development.

The Australian Government has been invited by the Government of India in association with the Indian Centre for Environmental Education to run a government stream of the Fourth International Conference on Environmental Education in Ahmedabad India 24-28 November 2007. The sessions will focus on sharing experiences in the development of national approaches to education for sustainability and developing potential for collaboration on practical projects.

Australia is also participating in a workshop on 29-30 November 2007 organised by the Pacific Centre for Environment and Sustainable Development (PACE-SD) in partnership with the New Zealand National Commission for UNESCO on implementation of the Draft Action Plan for Education for Sustainable Development in the Pacific.

Education for Sustainable Development Grants Programme 2006-07

The Australian Government Minister for the Environment and Water Resources approved grants for the following projects submitted under the Education for Sustainable Development Grants Programme 2006-07.

Royal Australian Institute of Architects: Going Better (or Beyond) - Case Studies for Built Environment Design Professionals. The project will:

- provide architects, and other built environment design professionals, with case studies of built projects that go beyond current sustainable solutions;
- identify key success factors and the ways current practice needs to change to facilitate the design and construction of innovative sustainable buildings, drawing upon the experience and expertise of built environment design professionals to facilitate change; and
- identify future areas of activity to improve the sustainability of the Australian built environment.

Hunter Councils Inc (including the 14 Councils of the Hunter, Central and Lower North Coast): Development of a training package for elected local government representatives on sustainability. The package:

- is tailored for and targeted at senior managers and elected representatives;
- delivers innovative "experiential" capacity building initiatives across divisions and management hierarchies of councils;
- collates and develops best practice tools and resources for education for sustainability; and
- facilitates the transition from theory and awareness to practical implementation of sustainable practice across council decision making and operational processes.

Total Environment Centre Inc: Corporate Sustainability Business Forum Series. The forums will involve members of the business community in a 6 month educational programme of debate, forums, briefings and case studies about Corporate Social Responsibility in Australia. Themes include:

- Socially Responsible Investment (SRI) review: A review of ways to mainstream SRI, latest proposals and implementation;
- Sustainability Communications & Reporting: How companies can avoid "Greenwash", identify CSR evaluation processes and standard reporting methods and showcasing best practice;
- Supply chain management: incorporating environmental requirements throughout the supply chain as well as involving suppliers and managing environmental improvement processes; and
- Director Responsibilities, Sustainable Governance: How the CAMAC Report from September 2006 and personal accountability issues will affect business governance and transparency.

Motor Trade Association of South Australia: National Environmental Auditing Tool for Industry Education project. The aim of this project is to develop a simple environmental audit tool for the automotive industry including new and used vehicle dealers, collision repairers, dismantling and recyclers, auto repairers and service stations. This is to be subsequently utilised as an education/training aid for the Motor Traders Association Group Training Scheme, but will also be made available to other educational bodies, TAFE colleges, training institutions and business associations.

Australian Association for Environmental Education, Northern Territory Chapter: Biennial National AAEE Conference to be held in Darwin from 1 - 5 July 2008. The conference is titled 'Environmental Education up the Track: Hot Topics for our Community'.

State: ACT

Department: Sustainability Policy and Programs

Schools Sector:

Australian Sustainable Schools Initiative – ACT

Following the completion of the 2006 pilot involving 20 ACT schools, an ACT Sustainable Schools website was launched in March 2007 to invite all ACT schools to participate in the initiative. (www.sustainableschools.act.gov.au) At this launch all ACT schools were invited to register as an ACT Sustainable School and to work with the AuSSI ACT team to conduct audits and develop a School Environmental Management Plan (SEMP).

By November 2007, out of 144 schools in the ACT, 88 ACT schools have registered to the AUSSI. Each school is recorded on a database and have begun conducting audits and developing SEMPS and action plans.

Each school is required to sign a formal commitment to the following in order to receive the support from the AuSSI team:

- ◆ Establish a leadership team
- ◆ Assist contractors to conduct water, waste and energy audits
- ◆ Work through a best practice guide in either water, waste, energy, biodiversity or curriculum
- ◆ Develop a School Environmental Management Plan (SEMP)
- ◆ A commitment to implement the SEMP, work for continuous improvement, integrate operations and curriculum and involve others in our goal
- ◆ Engage in professional development for staff linking sustainable schools to the new curriculum renewal process
- ◆ Share information and support other schools

A database has been developed to record the registered schools, their contacts, names of the people involved in the leadership team and which area they are working on eg: water, waste, energy, biodiversity or curriculum

ACT Sustainable Schools toolkit

The AuSSI ACT team in the Department of Territory and Municipal Services (TAMS) has produced an AuSSI ACT Toolkit which includes school audits, Operational Guides for energy, water, waste, biodiversity and curriculum, and Curriculum programs aligned to the new ACT Curriculum Framework.

The kit includes three components; A teaching program called Educating for Sustainability through the ACT Curriculum, an Operational Guide to Becoming a Sustainable School, and a bag of teaching resources.

The teaching program, *Educating for Sustainability through the ACT Curriculum* comprising units of work on water, waste, energy, biodiversity and climate change

has also been developed by TAMS in partnership with ActewAGL, ACTEW Corporation, ACT Department of Education and Training, and the ACT Conservation Council.

The Operational Guide to Becoming a Sustainable School provides step-by-step Best Practice Guides on how to reduce the schools ecological footprint through the careful management of water, waste, energy and biodiversity. The waste best practice guide encourages schools to recycle, and recognises that a schools purchasing practices can have a major influence on the amount of waste generated. The water and energy best practice guides emphasises the importance of education as the key to changing people's behaviour.

The toolkit will be distributed to every ACT school by the end of term 4 this year.

Professional Development for ACT teachers

AuSSI ACT schools have participated in the following professional learning workshops in 2007

- Educating for Sustainability for Early Childhood Educators
- Educating for Sustainability through the ACT Curriculum Workshops
- Water Reduction in Schools Workshop
- Energy Reduction in Schools Workshop
- Waste Wise Schools workshops
- Sustainable Schools Roadshow
- Sustainable Schools Youth Forum

ACT Sustainable Schools Roadshow

In September 2007, one teacher from all eighty eight registered AuSSI schools were invited to attend a tour to five of the most outstanding ACT sustainable schools. Forty five teachers attended. Teachers were driven by coach around to all five schools and were given presentations by both students and teachers on their sustainable initiatives in each school. Teachers were able to see a range of initiatives such as water harvesting, integration of sustainability through the school curriculum, waste wise schools, environment centres and mentoring programs.

Teachers urged that this event become an annual event as teachers don't often get the opportunity to see how other schools are working towards becoming a sustainable school.

ACT Sustainable Schools Youth Forum

In November 2007, sixty high school and college students from registered AuSSI ACT schools met for a one day forum. The aim of the day was to discuss the AuSSI and the needs and wants of secondary school students in order to establish their school as a sustainable school. Barriers were discussed but were quickly solved by the students and participating teachers. Sustainable School action plans were developed from each school and a substantial amount of enthusiasm and determination to establish their school as a sustainable school was displayed throughout the day. The fifteen schools who participated will work with the AuSSI team in 2008 to implement their action plans.

Jigsaw Theatre Company

The Department of Territory and Municipal Services and AuSSI ACT have developed a partnership with the local theatre company, Jigsaw to develop a musical production about Climate Change for 8 – 12 year olds.

“Too Hot to Handle” is a cabaret about climate change for kids and will be available to all ACT schools in 2008.

The AuSSI ACT coordinator and Jigsaw visited three separate ACT schools and ran a drama workshop with students on the topic of Climate Change. Much of what the students produced at these workshops is being implemented into the show.

Jigsaw are hoping to tour ***“Too Hot to Handle”*** throughout Australia following its season in the ACT.

MDBC International River Health Conference

Canberra hosted the very successful 2007 MDBC International River Health Conference from 14 to 17 October 2007. 561 delegates attended the kids teaching kids conference.

New Initiatives

ACT Climate Change Strategy

Earlier this year the ACT Government released *Weathering the Change* – the ACT Climate Change Strategy 2007-2025. In addition the first Action Plan (2007-2011) under this strategy was released. A number of education initiatives are outlined in this action plan. In particular:

- A comprehensive community education program to ensure that all Canberrans are aware of the potential impacts of climate change, and how together we can meet this challenge head-on.
 - Implementing sustainability in schools
 - Establish a Business and Academia Taskforce on climate change to facilitate partnerships to address climate change impacts.
 - Use Government and community buildings and public spaces to showcase adaptable and renewable technology
- Work to assist schools to become carbon neutral

School irrigation improvements

COMTROL irrigation system controllers are to be installed in an additional 15 government schools (17 schools already have the system. Schools are expected to achieve a 40% reduction in outdoor water use as a result. Funds have also been allocated for the upgrade and repair of 30 school irrigation systems to fix leaks and improve uniformity of water distribution.

School Water Audits

As part of AUSSI ACT, walk through water audits have been conducted in 33 ACT schools since July 2006. Another 11 walk through audits are planned to be completed by end June 2008.

Continuing Initiatives

Waste Wise Schools

In 2007 TaMS has seen 3500 students and members of the public tour the Materials Recovery Facility and Landfill. Students see what happens to their recycling and waste with interactive hands on and very visual demonstrations.

We have 88 schools participating in the Sustainable Schools program of which Waste Wise schools is now a part of. 75 of these schools are working on becoming Waste Wise and we have 12 schools already accredited. Reductions in waste to landfill has been on average more than 60%.

Three teacher workshops were run in 2007 with 70 schools represented. These workshops teach teachers how to put in the operational aspects of recycling in place from education to bins to collections.

Further and Higher Education Sector:

New Initiatives: Australian National University

Sustainability Learning Community

The Sustainability Learning Community (SLC) was formed in 2006 and aims to bring together students and faculty from diverse disciplines to explore sustainability-related issues by linking theory to real life problems on the ANU campus.

The goals of the Sustainability Learning Community include:

- linking academic theory to practice by providing opportunities for hands-on engagement in environmental initiatives
- fostering a link between the scholarly and social aspects of student life
- promoting collaboration among faculty, staff and students

The SLC was designed to build community amongst the student population. It has a residential home in Bruce Hall, and is actively supported by the Dean of Bruce Hall and several Bruce students. The group had a very successful first year with students from across the disciplines participating in a variety of activities including tree plantings on campus, regular social events, field trips to local organic farms and sustainably designed homes, the beginning of an organic garden on campus, and the Great Green Climate Change Debate which drew 150 people.

As a result of the success of the SLC other Learning Communities are now taking shape at the ANU and funding for a new person to coordinate the development of learning communities across the campus has been identified.

Continuing Initiatives

Green Steps Program

The Green Steps program is a government and industry funded education initiative that provides students with practical skills in environmental management and organisational change management. Students also undertake valuable work experience both within the university working with ANUgreen and through an external placement. This program is very competitive to get into, develops a broad range of practical skills and leads to good networking opportunities and future employment prospects

ANUgreen Internships Program

ANUgreen coordinates an Internship Program each year where up to 15 students work in the Sustainability Office on a wide variety of practical sustainability projects.

Integrating Sustainability Project (ISP)

The project is intended to develop a more integrative and holistic approach to sustainability initiatives at the ANU. This year we conducted scoping research to determine an appropriate path of action towards the ultimate goal of exposing all students, regardless of discipline to sustainability at some stage during their time at the ANU. This far reaching goal will require curriculum change across the faculties and colleges. We are looking at the viability of establishing an action research curriculum change project in the future. The project may be modelled on two possible projects that have been run at other Australian universities (RMIT and Macquarie University).

Research (New/Upcoming/Update on existing research)

Sherren, K.D (2007) *Sustainability Bound? A study of interdisciplinary and values in universities*, unpublished PhD thesis, Fenner School of Environment and Society, ANU

McMillin, J (2007) *Student Engagement in Education for Sustainability at the ANU*, unpublished Masters Thesis, Fenner School of Environment and Society, ANU
Other

Publications/Conference Presentations

McMillin, J., and R. Dyball (2007) *Developing a Whole-of-University Approach to Educating for Sustainability: Linking Curriculum, Research and Sustainable Campus Operations*, 4th International Conference of Environmental Education, Gujarat, India Nov 27 – 30th, 2007

Carpenter, D.B and R. Dyball (2006) “Outside in: experiential education for sustainability” in Leal – Filho, W (ed.) *Innovation and Communication for Sustainability*, Frankfurt: Peter Lang Publishers

Carpenter, D.B., Meehan, B., and B. Mitchell (2006) “Biodiversity planning in the tertiary sector: the challenge for universities”, W. Leal – Filho and D.B. Carpenter (eds.) (2006) *Sustainability in the Australasian University Context* Frankfurt: Peter Lang Publishers

Dyball, R. and D. Carpenter (2006) *Human Ecology and Education for Sustainability*, W. Leal – Filho and D.B. Carpenter (eds.) (2006) *Sustainability in the Australasian University Context* Frankfurt: Peter Lang Publishers

Reid, J., Carpenter, D.B., and B. Meehan (2006) “Art for earths sake: A case of integrated environmental education from the ANU”, W. Leal – Filho and D.B. Carpenter (Eds) (2006) *Sustainability in the Australasian University Context* Frankfurt: Peter Lang Publishers

Business and Industry:

New Initiatives

Commercial building retrofit

A commercial building water efficiency retrofit program is planned to commence in 2008. Fifteen buildings will be retrofitted with fixtures such as low-flow urinals and dual flush toilets on a 50:50 funding basis with building owners.

Water sensitive urban design code

A new water sensitive urban design code for all new development in the ACT has been developed. The code includes a 40% target for reduction in potable water use in all developments and advice on stormwater management and wastewater reuse.

Recycling Best Practice Guide

ACT is currently writing a Best Practice Guide for setting up recycling in offices and in business which will be modelled off the ones developed for schools.

Continuing Initiatives

Greywater use guidelines

The second edition of the ACT Government’s Greywater Use – Guidelines for residential properties in the ACT was produced.

Community sector:

New Initiatives

Community Education – Switch your thinking!

The ACT Government has already been pursuing education and awareness programs for water, waste and transport through various strategies including *Think water act water*, *NOWaste*, *Sustainable Schools* and *Sustainable Transport*. With climate change incorporating aspects of water, waste, energy, transport and biodiversity as well as social, health and economic issues, it is useful to have a single, integrated approach to education and awareness around sustainability and a “one stop” website for sustainability information and programs.

The *Switch your thinking!(syt!)* brand was developed by three councils in Western Australia to enable their communities to implement measures that will save energy, water and operating costs, and reduce greenhouse gas emissions. We are working to licence the brand to use in the ACT.

It is proposed that new climate change programs as well as water, waste, energy and transport current and new programs be brought under the *syt!* branding. We are still in the process of developing the strategy for the brand and how it will interact with established brands. In the future we hope to expand the brand to include health, planning and other relevant programs and messages for sustainability.

We will focus on different strategies for households, business, community groups, schools and Government. We will work to develop partnerships particularly with community groups to spread the message in the wider community.

Community events

The ACT Government participated in a range of community events through the year to engage the community on a range of sustainability issues associated with water, energy, waste and transport.

ACT Otherwise

ACT otherWISE (a community capacity building program for youth leadership for sustainable communities) continued to be supported by funding from the ACT Government Environment grants program and ACT Health funding. A series of youth sustainable consumption workshops, train the trainer sessions and youth networking opportunities are delivered through this initiative.

WaterSmart Homes and GardenSmart programs

The ACT Government's WaterSmart Homes program (home visit by plumber with installation of water efficient products and access to dual flush toilet rebate) closed 27 July 2007, primarily due to similar services being provided by companies accredited under the NSW Greenhouse Gas Abatement Scheme becoming active in the ACT. Thus allowing the ACT Government to redirect WaterSmart Homes funding into other existing programs like the GardenSmart service and to look at developing new programs to assist households to be more water-efficient. Since the start of the program in December 2004, 7,260 homes participated in the service.

The GardenSmart program (home visit by horticulturist, plus rebate program for water efficient products for the garden) continues to be popular, with 2,500 households participating in the program.

Additional education and assistance programs are currently being developed around greywater reuse and best practice irrigation. These programs are expected to become available in the first half of 2008.

ACT Housing retrofit

Funding has been allocated for a two year retrofit program of ACT Housing properties with dual flush toilets, water efficient showerheads and tap flow regulators.

ACT Energy Wise & HEAT

The ACT Energy Wise home audit and the Home Energy Advice Team service continued to be very popular. Since the start of ACT Energy Wise in November 2004, 1,893 home audits have been conducted and interest in the program is still increasing.

New Initiatives

ACT Waterwatch

Algae Snapshots:

Waterwatch for a number of years has used aquatic macro invertebrates to signal water quality. This is based on strongly observed correlations between physical and chemical water quality results and associated 'macros'. ACT Waterwatch is now beginning research which will help us map algae genera to physical and chemical parameters in a similar manner.

Riparian Assessment:

ACT Waterwatch is taking water quality out of the water and on to the banks by initiating Rapid Assessments of Riparian Condition along the Murrumbidgee, Ginninderra and Molonglo Corridors. Since riparian health is strongly linked to water quality, Waterwatch expects this initiative will spur a more holistic approach to water and land management.

SEE Change Centres

SEE - Change (SEE = Social, Economic and Environmental) is a non profit, community based initiative that has been commenced as a project within the Nature and Society Forum Inc (NSF). www.natsoc.org.au
www.see-change.org.au

The politicisation of the climate change debate has left many Australians confused and uncertain about the seriousness of the climate crisis and the options now open to them to deal with it. SEE-Change is a new movement, developing in Canberra Australia that seeks to empower people of all ages to consider, and act together on issues which challenge Australia's future. The Jamison SEE-Change Footprint Challenge Inc has set itself the goal of reducing the ecological footprint of a population of about 7500 people in three contiguous suburbs by 30% by 2010. It seeks to reduce CO2 emissions through a range of lifestyle and dietary choices as well as consideration of the option of domestic solar energy installation.

Recently South Woden SEE Change held a public forum for residents in six additional suburbs. Over ninety residents voted to also commit to a South Woden SEE Change Footprint Challenge and to work together to reduce their footprint by 30% by 2010.

Evaluations

ACT Community Sustainability Attitudes Survey

A survey of 1,000 ACT households was undertaken in July-August 2007 to primarily provide information on views, behaviours and practices relating to the environment and sustainability.

Kerbside recycling audit and survey

To aid community education on the recycling program run in the ACT, a kerbside audit was recently completed and a survey conducted on the community's attitudes towards the service being offered.

State: NSW

Department of Environment and Climate Change (DECC)

Schools Sector:

Sustainable Schools Initiative

Sustainable Schools NSW was launched on 8th November by the Minister for Climate Change, Environment and Water, Hon Phil Koperberg MP, and the Minister for Education and Training, Hon. John Della Bosca MLC. The new Sustainable Schools website, www.sustainableschools.nsw.edu.au, provides schools and others who work with schools, for the first time, with an online School Environmental Plan (SEMP) builder and with resources to integrate sustainability teaching and learning into the curriculum. The SEMP encourages schools to document and build on their existing environmental initiatives and to include the school community in the planning process.

The website is the outcome of a pilot program which was completed in 2004. The program is jointly managed by the NSW Department of Education and Training and the Department of Environment and Climate Change and is available to all schools across NSW, including the Catholic and independent sectors. Training for teachers and others will be provided in 2008 and the website will be updated with new resources, case studies and external links as they become available.

Business and Industry:

Continuing Initiatives

- With the inclusion of the sustainability competency standards in the new Manufacturing Training Package 2007, the DECC has funded and promoted a trial of the accompanying training resources in two companies. DECC has promoted the use of the sustainable manufacturing training resources in Diageo (an international beverage company located in Western Sydney) and Fairfax Regional Printers (in the Hunter). TAFE NSW is conducting the training. At Diageo training was conducted for small vertical teams on resource efficiency initiatives. At Fairfax Regional Printers all operational staff will be trained in sustainability as well as a number of supervisory staff. DECC will use the outcomes of the trials to promote the benefits of accredited sustainability training to business.
- The DECC program, Sustainability Advantage, is now working with approximately 180 businesses to assist them to adopt sustainability principles and practices. A key part of this is the Staff Engagement Module, which helps organisations educate and involve their staff in implementing more sustainable work practices. The number of clusters (of member organisations) has grown considerably, with the Tertiary Education cluster now including 6 TAFE Institutes and two universities.

- The DECC is developing an education program for the smash repair industry. The training program will be delivered to the NRMA preferred smash repairers in NSW and will be linked to national competency standards in the Automotive Industry Training Package.
- The DECC is developing a series seven of publications – the Environmental Action Series - aimed at improving the environmental practices of small to medium enterprises (SME) by providing up to date information on environmental responsibility and sound production practices.

The seven publications are for the Furniture and Timber Product Manufacturers, Printing Industry, Service Stations, Marina, Boatsheds and Slipways, Composite Industry, Smash Repairers and Automotive Repairers.

Further and Higher Education Sector:

New Initiatives

- DECC NSW is working with DET NSW and BVET NSW to ensure the take-up of the three guideline standards for sustainability into all training packages. Currently they have been endorsed as part of the new Manufacturing Training Package and the Seafood Training Package, however as elective units. The DECC and BVET are working at the state and national levels to promote the integration of sustainability competency standards as core units in all training packages.
- DECC presented to the NSW Skills Council on the need to adopt a whole of NSW government strategy to develop skills for a sustainable NSW. The Skills Council endorsed recommendations to focus on the property and construction, manufacturing and energy industries to promote sustainability skills across these industries in conjunction with key stakeholders. The challenges posed by climate change required sustainability skills for new “green” jobs eg in the renewable energy fields to facilitate the uptake of wind and solar PV technologies for example. Enhanced knowledge and skills for existing jobs (eg plumbers, builders, facilities managers, technicians etc) are equally urgent as the focus on energy and water efficiency in the built environment has shown. Therefore, the Skills Council proposed to put the recommendations to the MCEETYA and EPHC for national support and action.

Community sector:

Continuing Initiatives

- The **Our Environment it’s a living thing Integrated Sustainability Education Partnership Program** brought together government and non-government organisations to work in partnership to deliver an integrated and

coordinated sustainability education program. To mark the conclusion of the program a Partnership for Sustainability Conference was held in Sydney at the end of June 2007 to showcase and share the learnings and resources developed by the partners over the two and one half year period. The interactive full day event brought together sustainability educators in topical discussion about the issues that impact on and influence the uptake of sustainability across the community.

The Program and individual projects have been independently evaluated, the evaluator reporting that most projects met most or all of their project delivery objectives. Projects reached large numbers of people across a wide range of target groups ranging from households and loosely formed groups to formally structured action groups and organisations. The Program also played a significant and important capacity building role for the Partners and potentially for environmental educators generally. All projects have left a legacy in terms of products developed and enhanced organisational capacity.

The program had face to face contact with over 10,000 individuals and representatives from around 700 groups and organisations through community events, expos, seminars, presentations and workshops. The advertorial campaign alone reached a combined estimated circulation of 418,000 across targeted regional NSW and National titles.

More information is available at www.livingthing.net.au and click Projects & Partners.

- **Professional Development for Educators project** - A major component of the Integrated Sustainability Education Partnership Program has been the professional development for educators project. The **Professional Learning Hub** is an interactive online 'one-stop-shop' learning network designed to support the provision of ongoing, demand driven professional learning by connecting educators with service providers.

The Hub is driven by the **EfS Capabilities Framework**, which characterises core capabilities and professional learning areas required to be an effective EfS practitioner.

It is an interactive **Self Assessment Tool (SAT)** to assist educators in identifying their professional learning needs in the context of their work. On completion of the SAT, educators are provided with a personalised **professional learning profile** which assesses their professional capabilities based on responses provided. Easily updatable, personal learning profiles help educators to map, monitor and address their professional development needs by connecting them with learning resources and opportunities.

The Hub has been actively marketed and publicly demonstrated and is expected to be available live early in the New Year. A series of 'in-service' workshops for sustainability educators are planned following its release.

- **Research** (New/Upcoming/Update on existing research)
Update *Who Cares about the Environment in 2006?*
Four Fact Sheets on Water, Air Quality, Energy and Climate Change and Regulation have now been published to web

(<http://www.environment.nsw.gov.au/whocares/>). These bring together all findings from across the main *Who Cares?* 2006 report on these specific topics. Full data tables from this research are also now available on the web.

- **New *Who cares about Water and Climate Change in 2007?***

With the apparent increase in community and media interest in climate change since the conduct of the 2006 *Who Cares?* survey in June 2006, a follow-up survey was conducted in June-July 2007 focussing on the specific areas of water and climate change. This survey, with 825 people from the 2006 survey included key questions on priority issues and personal behaviours from the continuing series research, as well as a new question set on climate change.

The research found that priorities have changed markedly in just one year with water increasing markedly in importance as both a general issue and an environmental issue and climate change both appearing as a general issue for the first time and increasing substantially as an environmental issue, particularly with young people. Specifically on climate change, more than half of the respondents believe climate change is impacting now on themselves and their children, on people living elsewhere in Australia and on people living in other countries. They believe the greatest impacts will be on food and water supplies and household budgets.

Other:

Local Government sector – Urban Sustainability Program

- Announcements for successful Round 2 projects are about to be made. Project summaries will be available on the NSW Environmental Trust website thereafter. Progressive learnings from all Round 1 projects will be collated and communicated through e-networks after the first progress reports are submitted (ie, after March/April 2008).

State: Northern Territory

Employment, Education and Training, Natural Resources, Environment and The Arts

Schools Sector:

Sustainable Schools Initiative

A second proposal for funding as been put forward to DEW in order to further implement and sustain the AuSSI -NT focusing not only on ecological sustainability but also the social/cultural aspects of sustainability in order to strengthen student learning, teacher instructional practice and community development in remote indigenous schools. This phase of funding will support the sixteen schools working towards a whole school approach to become more sustainable schools as well as 2 more remote schools (Millingimbi and Batchelor) that will come on board.

Continuing Initiatives

- **NT Curriculum review**

Sustainability concepts are currently being embedded into learning areas in phase 1 involving science which includes embedding the national statements of learning.

- **Middle Years Initiative**

Middle schools are currently developing school curriculum plans with many schools choosing to concentrate on environmental sustainability for their extended learning (project based learning) focus.

- **Schools Energy Blitz**

A collaborative project involving DEET, Department of Planning and (DPI) and Infrastructure COOLmob, a sustainable living community project of the Environment Centre NT, aims to assist DEET achieve energy savings reportable under the NT Government Energy Smart Buildings Policy. Teachers and students in middle years classes in 6 Darwin schools have investigated energy issues, energy use and its relationship to the greenhouse effect – and making real changes to their schools and homes to save energy. This project has resulted in strategies that can result in 2 – 4 % energy savings eg. various lighting initiatives such as retrofitting lighting reflectors, skycool roof painting.

This initiative has also been informative as to the amount of support schools need in this area in order to develop a whole school approach and make real savings. Resources are also being developed from the project that all schools will be able to access and use.

- **Environment School Project Grants**

The Environment Protection Agency Program administers an annual grants program making funding available to schools throughout the Territory for environmental activities and projects developed by schools. The major objective is to support action based educational projects promoting ecological sustainability

and build awareness of the cumulative impacts of our personal behaviour and lifestyle choices. Applications opened in March each year. The grants target projects that will improve awareness in the community of the benefits and opportunities provided by sustainable technologies and practices and to help develop environmental management solutions for the Territory.

School Environmental Education Projects (up to \$2,000) are available to all schools for environmental education activities including:

- projects identified in an School Environmental Management Plan (SEMP);
- activities to assess and reduce ecological footprints (e.g. water/energy audits and efficiency programs);
- investigating issues such as environmental stewardship, sustainability and global warming in the Territory context and developing and implementing community awareness strategies;
- promoting the understanding of renewable energy technologies (e.g. demonstrating solar, wind or water turbines, biodiesel etc.) within the school community;
- researching, planning and creating habitat areas using local native plants in school grounds and neighbouring environs;
- investigating the ecology of the NT, incorporating a participatory action based approach
- WaterWise landscaping and action based education programs; and
- TravelSmart initiatives focusing on promoting walking, cycling, bussing or car pooling travel options to and from school.

Information available at: www.environmentgrants.nt.gov.au

• **Tropical Savannas Knowledge in Schools Project**

Schools now have access to a comprehensive range of online educational resources focusing on the Top End environments in which most of our NT students live. The website *EnviroNorth: Living Sustainably in Australia's Savannas* www.environorth.org.au is a rich, authentic online resource that has been developed with teachers and students over the past two years. This has been a collaborative project between Tropical Savannas Management Cooperative Research Centre and DEET.

EnviroNorth has three key sections:

- *Learn Savannas* - the interactive student modules. The first module is 'Savanna Walkabout focusing on biodiversity and the second module to be launched early 2008 is "Burning Issues" focusing on fire as a land management tool
- *Teach Savannas* – which includes curriculum links and teaching support materials
- *Savannas Windows* - the resource section for student inquiry.

An inquiry-based, integrated approach to learning underpins the modules with the Teach section of the website supporting teachers on how to use this resource within an effective teaching and learning program.

- **NT Waterwise Schools Program**

NT Waterwise Schools is a Northern Territory Government project, coordinated and funded by the Department of Natural Resources, Environment and The Arts and supported by Power and Water Corporation.

The NT Waterwise Schools program is designed to assist schools in Central Australia to achieve excellence in water management education and practice, and to recognise and promote these achievements to the wider community. Central Australian schools may apply for a grant (maximum \$3000 including GST) through the NT Waterwise Schools program for a project that saves water, improves water efficiency or conserves the values of a waterway.

A funding round opened during National Water Week 2007 and will close on March 3 2008.

New Initiatives

- **Engaging Indigenous students in science using Savanna Walkabout in language**

This research project (Charles Darwin University, Tropical savannas CRC, DEET) will examine and evaluate the Indigenous component of the Savanna Walkabout student module on www.environmentnorth.org.au The research team will conduct research focusing on the impacts of weeds on an Indigenous Homeland the Rak Mak Mak Marranunggu People and how they have addressed their problem. The project will focus on building from the Indigenous knowledge to incorporate western science knowledge and 2 schools will be participating.

- **Re-thinking Waste in Schools Challenge**

The Re-thinking Waste-in Schools Challenge invites all NT schools to encompass a broad range of long term sustainable initiatives for reducing all types of waste. The challenge is based on actions schools takes in the areas of litter reduction, recycling, energy and waste reduction. A list of sustainability action projects and resources that participating schools can select from will be made available on the Keep Australia Beautiful NT website www.kab.org.au/nt

A workshop for schools participating in the challenge will be held in Darwin and Alice Springs 30 November. Small \$500 grants through the EnvironmeNT school project grants are also available for those participating schools

- **Sustainability and Energy Smart Officer –**

DEET Infrastructure have just advertised this AO6 position for 6 months. DEET Infrastructure and the Department of Planning and Infrastructure are also working on developing a solution so schools can retain savings made as currently this is an issue. The proposal is looking at a cap for funds that the school will have to manage for their utilities and if they save they will be able to keep and if they go over they will have to fund from another source.

- **Water Education in Santa Teresa**

The NRETA Water Conservation Officer in Alice Springs, with support from DEET, has assisted a teacher of a Year 3/4 Class in Santa Teresa (Lyentye

Apurte) to develop and run a unit of work relating to water education. This has involved providing the teacher with support materials, a suggested unit of work outline and running two activity days focussing on fun, educational activities. Topics covered during the unit of work included; the water cycle in an arid environment (focus on groundwater), how water is used in the community, and how and why water should be saved. It is hoped that at the end of the program the class will have generated a list of “Community Water Rules” that with the approval of the local Community Government Council will be displayed around the town and that the project will inform the development of a Remote Communities version of the Waterwise Schools resource pack.

- **Collaboration between Government Departments and Community Groups**

Representatives from DEET, NRETA Water Conservation and Alice Springs Desert Park, the Arid Lands Environment Centre, Land for Wildlife, and Desert Knowledge Australia COOLmob met in August to discuss ways of working together. The initial discussion looked at the goals of the individual organisations, the existing strengths and the shared goals. The group agreed to continue to build the relationships between them, to support each other by sharing skills, expertise and knowledge and to establish a project based working partnership beginning with a focus on supporting schools through the Re-Thinking Waste in Schools project.

Further and Higher Education Sector:

New Initiatives

- **ARIES Teacher Education for Sustainability Project**

The Building curriculum - education for sustainability project aims to raise the profile of Education for Sustainability in the pre-service teacher programs in the Northern Territory through involvement with peak agencies in curriculum and professional development. Multi-dimensional systemic change for sustainability will be achieved by actively involving stakeholders.

Community sector:

New Initiatives

- **Alice Springs Vege gardening companion**

Published in late 2006. Primarily written to assist people who would like to grow their own vegetables in Alice Springs. The book includes a planting and harvest calendar displaying what it is possible to harvest the year round. A calendar of recipes for each month of the year has been included and were gathered from community members. Stories from successful gardeners were also gathered and information provided about eating locally, saving seeds in the garden. All 250 copies of the first print run have been sold and a reprint has been done.

Alice Springs town council provided money for compilation and printing of the book and support was provided by ALEC, Seedsavers network and the Office of Central Australia (NTG).

There are plans for the next addition to include information on growing fruit and nut trees in Alice Springs, as well as new stories, including gardens from out bush, information on how to start school garden initiatives and community gardens.

- **NT Waterwise Central Australia Rebate Scheme**

The Northern Territory Government is providing rebates of up to \$50 for certain water saving products and up to \$500 for eligible plumbing services purchased by residents in Alice Springs and Tennant Creek.

Eligible products (attracting a rebate of up to \$50) include low flow shower rose (3-star plus), flow controller, hose trigger nozzle, garden timer tap, dual flush toilet suite (4-star plus), washing machine (4-star plus) and a swimming pool cover (with a Smart Approved WaterMark).

A Plumbing Rebate of up to \$500 (incl. GST) is available to households in Alice Springs and Tennant Creek for the following services performed by a *GreenPlumber*[®];

- a. Plumbing services associated with connecting a rainwater tank to a household hot water system, toilet, washing machine, air-conditioner or to supplement household drinking water supplies. Minimum tank size eligibility is 1000 litres.
- b. Plumbing services associated with installing an NT Government approved greywater diversion device. Greywater diversion devices must comply with NT Government guidelines and must be installed by a licensed plumber. For more information and a list of NT approved greywater diversion devices visit www.nt.gov.au/health.

*A *GreenPlumber*[®] is an NT licensed plumber who has undertaken *GreenPlumber*[®] training and is aware of best practice water and energy saving technology. A list of *GreenPlumbers*[®] will be made available on this website.

Residents can apply for a Plumbing Rebate through a DKA COOLmob Home Water Audit. A trained auditor will assist the householder to identify where most of the water is being used in their home and recommend some strategic solutions for reducing water usage.

State: Queensland

Department of Education, Training and the Arts (DETA)

Schools Sector:

Queensland Environmentally Sustainable Schools Initiative (QESSI)

1. The *2005-07 QESSI Progress Report* is in draft form and will be published in December 2007. This report is a combination of the outputs and achievements against the eight QESSI goals from the 2005-07 QESSI Alliance Strategic Plan from the QESSI Alliance members and QESSI regional hubs. The progress report also highlights the sustainability outcomes for the QESSI cluster schools, over the past three years, in the areas of social, economic, educational and educational benefits to these schools as a result of being part of the QESSI concept. It is rich with qualitative and quantitated evidence based sustainability outcomes that demonstrate the whole-of-school and transformative approaches to sustainable schools. Copies will be distributed to all members of AuSSI once it has been approved for distribution.

2. The Queensland Department of Mines and Energy has entered into a three-year partnership with the DETA to deliver the *EnergyWise Schools Action Plan* for Energy Efficiency through 10 of the regional QESSI hubs. This agreement is worth \$300,000 over the three years. It begins with a train-the-trainer professional development workshop in 3-4 December and the engagement with schools starts in 2008. Each regional hub will work in depth with 6 cluster schools each year over the term of the project.

3. QESSI Steering committee is currently revising the *QESSI Alliance Strategic Plan* with a view to renew it for 2008-2010. Also the QESSI Steering Committee is going through a re-structuring phase. This is as a result of the increase in activity and membership of the QESSI Alliance. The suggested structure could be a steering committee comprised of strategic members and a network of practioners from the QESSI Alliance and Hubs. This will enable the QESSI concept to grow both strategically and operationally without disenfranchising any participants in the delivery of support of environmental education for sustainability for schools in Queensland.

New Initiatives

DETA Strategic Plan 2007-2011

For the first time in the history of the Queensland Department of Education, Training and the Arts, the department's Strategic Plan includes a strong reference to environmental sustainability in several sections. These highlights include:

- The Value statement that states; DETA Values – **Environmental Sustainability**.

- Our Department's Priorities include: Economic, Social and *Environmental Wellbeing*
- Within this goal the objective is : A prosperous economy, cultural vibrancy and *environmental sustainability* driven by Queenslanders' skill, knowledge and cultural strengths.
- This is to be achieved through: Contributing to the development of a society where individuals can enjoy personal fulfilment, economic prosperity, cultural engagement and a *sustainable environment*.
- One of the strategies to achieving this Goal is: Improve the capability of individuals to participate in their communities and build capacity for *sustainable communities*.
- We are also encouraged to manage our performance in this area by: *Reduction in the environmental impact of the operations of the Department*.
- In the section on Organisational Capability one of the strategies is to: Ensure the principles for sustainability inform corporate decision-making and the management of learning environment and facilities.
- In the section on Our Delivery Areas – Education Queensland there is reference to: Develop and implement a curriculum underpinned by a values framework. This is now known as the *Active and Informed Citizens for a Sustainable World – Values Framework for State Schools*.

Destination 2010 – Action Plan 2006-08 (Revised 2007) School Improvement and Accountability Framework (SIAF).

This is a document that all state school principals receive each year. It is the school specific strategic planning tool that informs state school principals as they develop their site specific Annual Operational Plans. For the first time ever in the history of Education Queensland, there is a specific focus objective on Environmental Sustainability. The statement is:

[Schools are to] implement strategies and actions, in partnership with the community and within the school, to reduce the school's ecological footprint.

Continuing Initiatives

The DETA Sustainability Steering committee was established in March 2007 and is comprised of Assistant Director-Generals from within the portfolio. The steering committee was established to set a strategic direction for sustainability issues across Education, Training and the Arts. The main task is to progress the recommendations from the Ministerial Advisory Committee on Educational Renewal (MACER) report on *Educating for Sustainable Futures: Schooling in the Smart State*. One of the main outputs from this Sustainability Steering Committee is a one page Statement on Sustainability for All Queensland Schools. This statement will be available soon, once it has been approved by all three education sectors in Queensland.

Evaluations

The QESSI Alliance commissioned an evaluation of the QESSI concept that was conducted by the QUT and Griffith University. The recommendations from this

evaluation have been incorporated into the progress report as well as the revisioning and renewal of the 2008-2010 QESSI Alliance Strategic plan.

Research

Update on existing research

The ARC Linkage/UQ/O&EEC research project has been completed and the project report is currently being finalised. This is a three year research project that has focussed on the program delivery by the network of 25 Education Queensland Outdoor and Environmental Education Centres and the impact on learning for sustainability for students. The final report will be available soon, however draft final report and other progress reports can be downloaded from this website: <http://www.talm.uq.edu.au/learning-for-sustainability/>

New and Upcoming

The Queensland consortium, lead by the Sunshine Coast University and QUT, through the Eidos Research Organisation, has been successful in obtaining funding for the research project looking at pre-service training and education for sustainability. This is a DEW funded project, auspiced through ARIES and DETA is a supporter in principle of this project called iQuEST (Investigating Quality Education for Sustainability in Teacher Training.)

Other

The **DETA Annual Report** contains 12 pages of significant outcomes from across the portfolio in the area of environmental sustainability. The 2002-03 Annual Report only had one line that related to environmental education. This latest inclusion on the DETA Annual Report indicates a significant increase in activity in the area of environmental sustainability.

Sustainability in Education is a paper that has been produced to give an overview of the actions and outcomes across the Queensland Department of Education, Training and the Arts for the past few years.

Department: Environmental Protection Agency

Schools Sector:

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

Power for a sustainable future

This is an energy efficiency resource kit developed in collaboration with Education Queensland to meet the objectives of the Queensland science and environment curriculum.

http://www.epa.qld.gov.au/environmental_management/sustainability/energy/schools_program/

WaterWise

Schools toolkit, fact sheets, board game and posters developed by EPA. Currently being transitioned to Department of Natural Resources and Water, however limited stocks are still being distributed to schools by EPA.

http://www.epa.qld.gov.au/environmental_management/water/waterwise_toolbox/waterwise_councils/waterwise_schools/

Continuing Initiatives

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

Brisbane Ekka display

Mock “sustainable home” display featuring water and energy features, located in the Queensland Government pavilion. The display offers a hands-on look at the features of a sustainable home, and their benefits. It is supported by products such as shower timers, information sheets, stickers and activity booklet.

Global warming – Cool it!

An Australian Greenhouse Publication distributed to Queensland schools by EPA.
<http://www.greenhouse.gov.au/gwci/pdf.html>

Bush Telegraph

A 12 page newsletter aimed at the general public and children, providing information on the environment, nature conservation and our parks. Includes a specific *Wild Kids* section with activities relating to the theme of the issue.

http://www.epa.qld.gov.au/parks_and_forests/bush_telegraph/

Go Bush program

Information sessions, activities and guided walks and tours in selected National Parks in Brisbane, Gold Coast and Sunshine Coast.

<http://www.epa.qld.gov.au/register/p01357af.pdf>

Nature Exposed

A 2-3 day “train the trainer” professional development program for teachers, aimed at improving their knowledge of environmental issues and developing skills for teaching environmental content. The program is offered on demand by EPA’s Conservation Services Division.

Parks Programs

David Fleays Wildlife Park program

- Offers a range of curriculum based programs that address key learning outcomes and cater for the formal education sector - particularly years P-12. There are 10 predesigned programs for P-7 or programs are tailored to suit a teacher's learning outcome requirements.
- School holiday programs (Go Bush and "Be a ranger for a day" programs) are also held for groups of children up to 12 years of age.
- Promotional material on all programs is sent to teachers on the Gold Coast and schools from Brisbane and outlying areas who are current clients of the park.
- School excursions - special environmental education and cultural awareness programs tailored for school groups. Curriculum-based programs are available for students from pre-school to Year 12. The main focus of the education programs are on threatened species, habitats and animal adaptations to their habitats. Programs can also be designed to study mangroves, rainforest, wetlands, biology, conservation and Aboriginal culture.

http://www.epa.qld.gov.au/nature_conservation/wildlife/david_fleay_wildlife_park/school_excursions/

Brisbane Forest Park program

- Offers the "Connect with Nature" educational programs for class excursion groups, from kindy to tertiary institutions. Worksheets and information are provided to support the learning experience.
- The Go Bush program is also offered to children at Brisbane Forest Park.
- http://www.epa.qld.gov.au/media/parks_and_forests/parks/bris_forest_park.pdf

Mon Repos Conservation Park

- Offers school excursion programs outside turtle nesting season. Special activities for children include slide shows, mangrove walks and beach transects, while the interpretive displays have information specifically for school age children.

Daisy Hill Koala Centre

- At the Koala Centre, koalas can be viewed close up to provide a learning opportunity for educational purposes. The displays exhibit life cycle to adaptation to the changing Australian environment. Free activity sheets are available for children. Rangers and volunteers are available to explain how to find out how to look after koalas in local areas. Additional information about other native animals and national parks is also available.
- Connect with Nature – Daisy Hill's Environmental Park Environmental Program for 2007

A wide range of curriculum based environmental education activities is available for primary and secondary school groups. The program gives students the opportunity to experience Queensland's natural environment and cultural heritage through ranger-guided activities.

Fee concessions for educational excursions/camps in recreation areas

Entitlements of school groups on approved educational excursions to concessions from camping fees, vehicle permit exemptions, and daily fees in recreation areas declared under the *Recreation Areas Management Act 2006*.

Web content

EPA provides a comprehensive range of online information resources for school students in electronic and print-friendly form. The online medium offers information on topics as diverse as parks, endangered species and renewable energy, and is an ideal medium for the needs of a young, computer literate audience.

Television content

EPA staff work with Channel 10 to present information on the Totally Wild program aimed at school children up to 14 years. It includes segments about wildlife parks and other environmental issues.

Earth Charter

EPA is providing support to this project by undertaking graphic design for the poster and promotional flyers and participating on the judging panel.

Queensland Youth Environment Council (QYEC)

The QYEC is a joint initiative between the Minister for Sustainability, Climate Change and Innovation, and the Minister for Education, Training and the Arts.

The Council, comprises 30 young people, 16 to 25 years, who meet twice a year to consider and provide advice to the Queensland Government on specific environmental sustainability issues. The key purpose for the QYEC is to provide a youth perspective to the Queensland Government on key environmental sustainability issues facing Queensland, and for youth leaders to enhance awareness and inspire other youths to take action to achieve a more environmentally sustainable future for Queensland.

The key environmental sustainability issues on which the Ministers have initially sought the Council's advice include: climate change, water use, renewable energy and wildlife conservation

Further and Higher Education Sector:

New Initiatives

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

Continuing Initiatives

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Business and Industry:

New Initiatives

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

Continuing Initiatives

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

ClimateSmart Living Program

EPA's division of Sustainable Industries, in partnership with other state government departments, undertakes projects to transfer knowledge and skills about sustainability to communities. Their various projects promote "climate smart living" ranging from retrofitting homes, reduction in energy use to sustainable methods of transport. Education components of projects include working with business and tradespeople to achieve sustainability – for example, training retailers and tradespeople on the benefits of sustainability in their

products and services. It is anticipated that there will be a strengthening of these programs.

ecoBiz

EPA conducts the ecoBiz program for industry. This program promotes the transfer of knowledge and skills to business and industry, using the incentive of cost savings and increased business through improved environmental performance. It provides business managers with a simple methodology for defining resource costs in terms of units of production. This assists managers to prioritise areas for improvement and enables accurate calculations of payback periods.

Clean Sites - Management of sediment flows from construction sites

EPA's Operations division administers legislation and associated awareness projects to minimise sediment flows from construction sites. For example, it works with Keep Australia Beautiful Queensland to conduct demonstration sites featuring best practice. EPA is working with KAB to develop a DVD tool for training purposes.

Community sector:

New Initiatives

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

Continuing Initiatives

Education Programs Generally

The Environmental Protection Agency includes education and awareness components applicable to this segment in many of its activities. Specific projects are listed in this document.

ClimateSmart Living Campaign

This campaign is being conducted state-wide. It is based on mass media and is designed to achieve awareness, education and ultimately behavioural change to address specific issues about climate change. To elicit behaviour change, the campaign is based on five calls to action – Change a light bulb; Cool it by degrees; Climate under pressure; Splash and dash; Queensland unplugged.

The web site <http://www.climatesmart.qld.gov.au/> contains many educational components such as Do It Yourself Sustainability check; travel; products; carbon calculator to contribute to addressing climate change.

ClimateSmart Living Program

EPA's Sustainable Industries division, in partnership with other state government departments, undertakes projects to transfer knowledge and skills about sustainability to communities. Their various projects promote "ClimateSmart

living” ranging from retrofitting homes, reduction in energy use to sustainable methods of transport. It is anticipated that there will be a strengthening of these programs.

Clean Coasts and Waterways

EPA’s Planning Division conducts projects about education and awareness to minimise pollution in waterways and coastal areas. They also contribute to major governmental activities such as the Brisbane-based RiverFestival. The RiverFestival includes a major conference for Australian and international attendees, public events and education sessions.

Litter Management

EPA’s Planning and Operations divisions administer legislation and undertake associated awareness projects to minimise pollution through litter.

National parks

EPA’s Parks division manages the national park estate for Queensland. It conducts a broad range of education and awareness programs, as well as interpretive programs.

Conservation Services

EPA’s Conservation Services division manages native fauna and flora, and administers programs to protect endangered and threatened species, such as whales and dugongs. Conservation Services conducts educational programs to support its work, as well as contributing to events such as *Threatened Species Week*.

Brisbane Ekka display

Mock “sustainable home” display featuring water and energy features, located in the Queensland Government pavilion. The display offers a hands-on look at the features of a sustainable home, and their benefits. It is supported by products such as shower timers, information sheets, stickers and activity booklet.

NatureSearch Volunteer Training/Accreditation

Volunteers are trained to collect and provide data for the Queensland Parks and Wildlife Service’s WildNet database. Following checking and verification, data is approved for loading into the database where it can be used by managers, planners, biologists and naturalists for a range of planning and conservation purposes. The multi-faceted training, testing and accreditation program ensures that all data collected and entered is reliable. Training is available in certain TAFE colleges with the option to obtain formal accreditation. Courses on field skills and species identification are also run at the Queensland Museum and in regional centres. Training is tailored to needs in each NatureSearch district. All training is supported by field work to ensure the highest quality field skills.

Major Research and Reports

Annual Report

The Agency reports against its government priorities in its annual report.

Environment Survey 2006

EPA conducted the Environment Survey 2006. This survey is similar to the New South Wales survey program, *Who Cares About the Environment*, which provides opportunities to compare findings. The Queensland survey provides baseline data for future social marketing activities.

A number of sections of this survey have been updated in 2007 through the evaluation carried out for the ClimateSmart Living campaign.

State of the Environment Report

EPA publishes its major report *State of the Environment* each three years. It is anticipated that the forthcoming publication will be more actively promoted.

ecoBiz Survey - 2007

EPA undertook a baseline survey of industry and business responses to its ecoBiz program in the Ipswich region. ecoBiz is a signature partnership program with Queensland business and industry. It aids business and industry in achieving cost savings and taking advantage of profitability of improved environmental performance.

2007 Community Queensland Parks and Wildlife Service (QPWS) Survey

QPWS surveys its customers every three years. This survey is designed to provide data about park management but provides opportunities for social research.

State: South Australia

Department of Education and Children's Services

Schools Sector:

New Initiatives: Australian Sustainable Schools Initiative – South Australia

Climate Change Education Resource.

Climate Change Education Resource

- Re design of ecomapping auditing tools and education package

Milestones

Funded by Premier and Cabinet

Greenhouse Strategy

- AuSSI-SA reporting targets to the South Australian Greenhouse Strategy
“Tackling Climate Change”

Milestones

Supporting AuSSI-SA is now specified in the DECS Community Development Actions for tackling climate change.

1. “Continue to provide assistance for the Australian Sustainable Schools Initiative – South Australia to integrate educational programs that have a climate change and greenhouse learning focus”
2. Trial a climate change program in a six school cluster
3. Introduce climate change and greenhouse content into school curricula and practical school based actions

Cluster school development

- Climate Change Coalition in partnership with AuSSI-SA has received a ASISTM grant to develop tools and curriculum to support climate change education. Scientific Literacy will underpin curriculum innovation I this project.

Milestones

Successful bid.

Natural Resource Management Boards

- Integration of AuSSI-SA model into NRMB education plans.
- Funding support for AuSSI-SA from the NRMBs

Milestones

Regional support from NRM's for AuSSI – SA. Regional and Metro workshops to support EfS at schools and in the community planned for 1st half of 2008.

Ongoing:

Professional Development

Education service provider and teacher professional development sessions

- Waterwatch, Catchment Care, MurrayCare, Community Gardening

- Natural Resource Management Board PD (Murray Darling, Adelaide Mt Lofty and South East)
- Australian Association of Environmental Education (AAEE) and AuSSI-SA professional development sessions

Milestones

Professional development

AuSSI-SA Guide to becoming a sustainable school

- Rubric tool for evaluation and assessment.
- AuSSI Indicators with NRMBs.
- AuSSI - SA case studies from preschools and schools
- Professional development sessions to support the Guide across the State

Milestones

AuSSI-SA Guide, posters and associated communication strategy

DECS ESD Unit report

Energy Auditing:

The 2006 DECS Energy Efficiency Scoping Study investigated consumption at 120 of the largest electricity consuming DECS schools in order to identify schools with the greatest potential to reduce energy consumption, and to develop financially viable project proposals.

The \$1 million ESD grants program is being targeted to assist schools that have not yet reached energy efficiency targets and to schools identified as having significantly increased their energy consumption over recent years. The funding will be used to undertake Level 2 AS/NZS 3698 audits and to reduce the schools' consumption below threshold levels thereby achieving significant energy savings. 34 sites in total has been allocated funding to date.

Retrofitting:

DECS is seeking to make the most of the relative consistency of its installed equipment by selecting energy efficiency technologies and then retrofitting schools across the portfolio. Before a preferred technology is selected, a range of measures will be tested including; timers, dimmers, occupancy sensors, efficient lighting retrofits and domestic hot water retrofits. Retrofitting grants of \$50,000 each have been provided to Christies Beach High School and Richmond Primary School for extensive retrofits. Results will be closely monitored through sub-metering.

Solar Schools

97 schools have had 2 kW solar cell systems installed to date with an additional 15 to be installed in September 2007. These installations (97) will generate 290,000kWh, or 1044GJ per year. This comprises 0.23% of total energy consumption in DECS. Installations are integrated in the sites' curriculum.

Budget Reinvestment Strategy

From 2008, the rolling average utility resource formula will be replaced in line with consumption targets based on a reduction on schools' 2000/01 electricity/water

consumption. Funds allocated for electricity/water costs will be adjusted against these targets. Schools that have met their target will be funded at the achieved consumption level. Per site electricity/water consumption data has been published on DECS asset management network and energy/water management information is available via DECS Intranet.

Preschool Utility Data

DECS are currently undertaking a utility data collection process from all DECS Preschools (>400 sites). Sites have been asked to provide copies of their electricity bills so that their information can be supplied to DTEI Contract Services for eventual rollover onto the whole of government energy contract. This will allow preschools to access the government tariffs and also allow for all preschool consumption data to be reported in OSCAR.

Greenstar Rating Tool:

Green Building Council of Australia has developed a pilot Greenstar tool capable of measuring the environmental performance, including the energy efficiency of education buildings. This tool will rate a number of aspects of a school's design, construction and operation including indoor environmental quality (daylighting, ventilation etc), energy management, transport, water, materials, land use and ecology, and pollutants. DECS has committed to making the six 'Education Works' (Super Schools) 5 star Greenstar under this tool.

Fact Sheets

A range of fact sheets have been developed providing guidance and energy and water saving ideas on the following:

- Solar schools
- School heating and school and cooling
- Hot water in schools
- School office & IT hardware
- Reading meters
- School lighting
- Applying for grant funding

Department for Environment and Heritage

Schools Sector:

AuSSI –SA

- Report above SA

Environmental Education Resources

The Environmental Education Branch has also worked in partnership across DEH to complete the development of other Environmental Education Resources: -

- The Ocean to Outback Education Resource - to support the new Interpretative Centre in the Cleland Wildlife Park
- Gavin the Leafy Sea Dragon education Resource to support the Gavin the Leafy Seadragon short animated film.

- A DRAFT Schools Environmental Action Education Resource has been distributed to interested teachers for comment and to be trialled in schools in term 1, 2008.

Continuing Initiatives

Education for Sustainability - Growing new Skills

The Education for Sustainability - *Growing new Skills* series is being run collaboratively by the Environmental Education Unit (DEH), the Adelaide Mount Lofty Ranges Natural Resources Management Board and the Department of Education and Children's Services.

'*Growing new Skills*' has been designed for professionals working in and with schools and community groups in Natural Resource Management or environmental education. Sessions to date include:

- "**EfS Tools - Learning in Practice**" session provided an interactive and fun look at lifelong learning styles and strategies.
- "**EfS Tools - Facilitating change in schools**" The workshop focussed on decision making systems in schools and ways in which Service Providers could work in and, with these systems to help integrate changes.
- "**EfS Tools - planning and evaluating**" explored various methods and, associated benefits of planning and evaluation methodologies.
- "**EfS Tools - growing new skills in our practice**" explored how to integrate what had been learned so far. Participants reflected on how to be a more effective educator by building on new knowledge and tools from the 2007 *Growing new Skills* series.
- **Growing new Skills additional Learning Opportunity Discussion** Group is attended by EPA, NRM, DTEI and KESAB representatives.
- Attendances continue to be excellent and evaluation of each session very positive.

Other

Youth Environment Council (YEC) of SA

- YEC informally celebrated the tenth anniversary and will have a more formal celebration in April 2008.
- YEC are presenting at the *Involve Forum – A Festival of Forums about working with young people* on 5 December. *Involve* is an Office for Youth event that will highlight to the Public Sector that working with young people is valuable and easy to do.
- The YEC are developing criteria for YEC Environmental Awards to be presented at the official 10 year celebration in 2008.

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- Gavin the Leafy Sea Dragon Education Resource to support *Gavin the Leafy Seadragon* short animated film.

“little island big pond” August 2007

A National Science Week Project supported by the Government of South Australia

During the United Nation’s International Year of the Dolphin, Kangaroo Island Community Education’s KI Dolphin Watch, in collaboration with Project Partners; The Whale and Dolphin Conservation Society, hosted a 3 day showcase of Science and Technology, as an introduction to Science Week 2007. The aim was to educate the global community regarding these magnificent iconic marine mammals. DEH Environmental Education staff presented at a Dolphin Forum with renowned experts. The event included a global Webcast event, an educational workshop and an opportunity to be “up close and personal” on a field trip on “KI Dolphin Watch” - an integral component of Marine and Environmental Education on Kangaroo Island.

State: Tasmania

Schools Sector:

Sustainable Schools Initiative

The AuSSI Tasmania pilot commenced in August 2007. Jenny Dudgeon was selected as the AuSSI Tasmania project officer and works 0.4FTE in this position. Expressions of interest were called for and 12 of the schools that responded were selected as pilot schools to be funded to participate in the pilot. The remaining schools that expressed interest were invited to participate as network schools – meaning that they have access to the project officer and AuSSI activities, but do not receive any funding.

A Steering Committee has been formed and has met twice.

A stakeholder workshop, focussing on *The value of forming strategic partnerships*, was held, which interested community organisations were invited to attend. Vanessa Whelan kindly agreed to present at the workshop. Twenty five representatives attended, and reported they found it to be very inspiring.

A teacher workshop was held for teachers from both pilot and network schools. The focus of the workshop was *What is the AuSSI initiative and what is my school committing to?* Representatives from a number of agencies presented, including Department of Education, Department of Tourism, Arts and the Environment, Australian Association of Environmental Educators, Sustainable Living Tasmania, Southern Waste Strategy Authority and Natural Resource Management. Participants reported that they found the day to be very informative.

The AuSSI Tasmania project was officially launched on Wed 28 Nov, with pilot schools receiving a framed certificate. Students ran tours of the sustainability activities occurring at Lenah Valley Primary School prior to the official launch.

Anecdotal reports are that organisations are starting to see the AuSSI project as a conduit for getting sustainability information to schools. In recognition of the workload that this generates, the project officer position will be 0.6FTE from the beginning of the 2008 school year.

Schools supporting national environmental days
Department of Tourism, Arts and Environment
Department of Parks and Wildlife

- Jenny Burdon, Parks and Wildlife officer to assist AuSSI schools with biodiversity focus

New Initiatives

Up2Me for Kids

Sustainable Living Tasmania launched the schools' version of their up 2 me website at : <http://www.up2meforkids.com.au/> The introduction on the website states:

Up2me for kids at school gives you ideas on how to live more sustainably. This means that by signing on, you will learn how to reduce your waste, energy use, car travel and water use. You will also be given ideas on how to grow your own food and take care of the biodiversity of your home and school environment. This will help you to leave a smaller ecological footprint on the Earth (Find out your Ecological footprint here). It's about protecting the Earth for your future. So take the challenge now and do your bit for the planet

Tasmanian Curriculum

New curriculum documents have been written for government schools. There are deliberate references to sustainability throughout the Science document. The new curriculum documents can be accessed at:

<http://www.education.tas.gov.au/school/educators/curriculum/tasmanian-curriculum>

Tasmanian Climate Change Office

As part of the premiers *State of the State 2007* address (see <http://www.premier.tas.gov.au/>), which coincides with the budget, it was announced that:

Climate change is an important issue globally and to progress the State's climate change strategy, a Tasmanian Climate Change Office will be established. The office will be tasked with progressing initiatives associated with regional climate modelling, emergency risk management, water availability, monitoring and analysis, sectoral impact projections and analysis, and information delivery and coastal risk management.

Continuing Initiatives

Community Garden Workshops - Seed to Plate Workshops

AAEE continued to run this series of workshops.

Business and Industry:

New Initiatives

Southern Waste Management Authority

Introducing to Tasmania a trial program of waste recycling working with 8 schools across the state, 6 of which are in the AuSSI trial . Program similar to Waste Wise but looking for a Tasmanian name. Support from SWMA available as professional ongoing support from Shaun Cousins and some funding for each

school.

Community sector:

New Initiatives

Tasmanian Museum and Art Gallery (TMAG) ICE E-MYSTERY: Global Student Polar e-books.

TMAG *Learning and Discovery* has been successful in gaining a grant of \$55, 000 from the Department of Education Science and Training to conduct an exciting international education program in 2008. 13 classes from Australian schools (mostly Tasmanian and including Cape Barron Island Primary, Strahan Primary... but also the Queensland School for Travelling Show Children) will be paired with 13 classes from Alaska, Canada and Norway to write 13 story books focussing on the polar regions in a mystery genre with art, science fact sheets and visits to TMAG and other 'polar' museum/ institutions. It kicks off in February/ March with web interface development, then the teacher workshops in June where children's authors Alison Lester and Coral Tulloch will help train teachers in art and story writing, scientist-educators from TMAG, Antarctic Division and UTAS will train teachers in the polar science and the whole writing part is on-line with electronic publishing of the books in December. All part of an Australian Schools Innovation in Science Technology and Mathematics (ASISTM) grant.

Learning and Discovery staff were today involved in the junk mandala project in the TMAG courtyard - as part of promotions for National Recycling Week.

Department of Tourism, Arts and Environment

National recycling week focus on recycling education for teachers through an after school session >

- \Art through Recycling 35 teachers attended
- Display in Service Tasmania
- Junk Mandala -Invitation to the public to create in TMAG

State: Victoria

Sustainability Victoria

Schools Sector:

In 2006 Sustainability Victoria (SV) commissioned a review of current approaches to Education for Sustainability (EfS) in Victorian schools. The Sustainability in Schools project worked across government and non-government agencies to develop a common approach to EfS programs for Victorian schools, including recommendations for a governance structure in Victoria. A major recommendation of the report Sustainability in Schools (2006-2007) was that SV was best placed to take up the role as lead agency in the delivery of EfS in Victorian schools.

Sustainability in Schools State Steering Committee-Update to be provided at meeting.

A major outcome of the Sustainability in Schools project was the establishment of a governance model led by the Sustainability in Schools State Steering Committee (SSC), that will lead to improved effectiveness and efficiencies in EfS program development and delivery to all Victorian schools.

The SSC formed in July 2007. The SSC involves key Victorian Government and non-government organisations working together in a genuine partnership approach to address the following issues in Victoria:

- processes for ongoing coordination, integration and collaboration among key government and non-government organisations;
- clear and agreed roles and responsibilities between key organisations;
- a strategic planning forum or process to guide the whole approach (and related to this, ongoing review and evaluation material to inform future directions);
- a common understanding of what the integrated approach to Sustainability in Schools looks like; and
- an easy access point to sustainability programs for Victorian schools.

The SSC's purpose is to provide strategic direction to the delivery of EfS resources and programs into all Victorian schools. The SSC is responsible for the development of an overarching strategic framework for coordinated action and a biennial plan identifying priorities.

The SSC will lead the development of an inclusive, broad-based 'Learning Community' that builds on existing communities of practice, networks and hubs of sustainability practitioners and draws in new stakeholders under the broad conceptual umbrella of EfS. This will enable the SSC to assess how it can add value to good practice in Victorian schools and amongst service providers, as well as have an impact on the broad scale of EfS programs.

SSC Members

The SSC comprises five members and is chaired by SV. It will be supported by a

flexible arrangement of working parties, reference groups and consultation forums as well as a 'framework' and prioritised strategic plan.

Ms Vera Lubczenko, General Manager, Community and Customer, Sustainability Victoria.

Mr Peter Lyon, Manager, Sustainable Communities, Department of Sustainability and Environment (DSE)

Ms Carol Kelly, Assistant General Manager, Student Learning Division, Department of Education Early Childhood Development (DEECD)

Mr Glenn Davidson, President, Victorian Association of Environmental Educators (VAEE).

Guy Pritchard, EfS practitioner

Executive Officer Ms Jane Liefman, Sustainability Victoria.

Next steps

A working group was convened in August, 2007 to commence development on a draft framework and strategic plan for 2007-2009. To ensure that all people/organisations whose work involves EfS in schools are engaged in this development process it is proposed that an EfS Learning Community will be established. Also other forums and consultation processes will be included in the elements of the strategic plan development. It is proposed that a draft will be completed by January 2008.

AuSSI Vic update to be provided at meeting

Through our leadership role, SV will assist to maximise the uptake of this framework in Victorian schools via three key components beginning in January, 2008:

Coordination of the AuSSI Vic Advisory Committee

Announcement of a tender (Education for Sustainability Program for Victorian Schools (working title), advertised Wednesday, October 24) for the delivery of the Core module, the management of the data set (qualitative and quantitative) and the administration of the certification process for the period 2008-2010.

Announcement of a tender (Professional Learning for Sustainability Facilitators, advertised Wednesday, October 24) for the delivery of a professional learning package for sustainability educators, including the delivery of the AuSSI Vic facilitator training.

DEECD and DSE have both had key roles during the consultation period through to the current AuSSI Vic framework. DEECD will maintain an active role in the implementation of the AuSSI Vic framework, namely via the publication of the Administration Guidelines in Principals handbooks, continued involvement in the Pre-service teacher training trial and ongoing participation in the AuSSI Vic Advisory Committee. DSE will continue their involvement via the AuSSI Vic Advisory Committee, in-principle support of the framework and further details to be developed along with the development of the State Steering Committee's strategic plan.

Waste Wise transition to ResourceSmart Schools - Waste

Under the banner of ResourceSmart Schools, Sustainability Victoria has undertaken a

tendering process for the delivery of ResourceSmart Schools – Waste. The tender focuses on the delivery of a waste education component under the banner of ResourceSmart Schools to Victorian Primary and Secondary Schools, and will be directly aligned with the AuSSI Vic framework.

The tenderer will be responsible for:

- Delivery of professional learning for primary and secondary schools
- Management and analysis of qualitative and quantitative data
- Alignment of program delivery with the ResourceSmart certification process

After undergoing the process for determining the successful tenderer it is intended to begin delivery of this program in January 2008.

Solar in Schools

The Victorian Solar in Schools Initiative will support schools and high profile community facilities to install highly visible grid-connected solar photovoltaic (PV) power systems, interactive energy monitoring systems and provide educational materials on renewable energy and energy demand. This initiative was announced as part of the 2006 Victorian Election, the Labour Government committed to the investment of \$5.0m over four years for the installation of solar panels on 500 schools and community buildings.

In the first round 53 applications were received. 26 schools and community buildings were selected via a competitive process as displaying the best potential to achieve the aims and objectives of the program. The education facilities represent a range of government and independent primary and secondary schools (21), kindergartens (2) and other community facilities (3) in both metropolitan (15) and rural/regional (11) Victoria.

A total of \$201,330 in rebates will be paid upon installation of systems ranging from 1 kW to 7 kW. Successful applicants (26 participants) attended an information session at Bentleigh Secondary College on November 14. This workshop provided great insight for teachers, students and installers

SV is working collaboratively with the AGO to develop a coordinated approach to program outcomes and to streamline the application process for schools and community organisations.

Solar in Schools is linking with the Victoria's Smart Energy Zones project in Strathfieldsaye (regional Victoria) to maximize sustainability impacts for the community and contribute to project outcomes for both Smart Energy Zones and Solar in Schools. The two schools will be working with SV in the first half of 2008 to develop teaching and learning resources for the Primary School sector as well as professional learning modules.

Application guidelines for the second round of Solar in Schools was due to be available

in early December 2007 before the close of the school year and close on February 29, 2008. Due to a change in federal government these dates are under review to allow for maximum leverage for Victorian schools and community organisations from both federal and state programs.

ResourceSmart Schools Awards

The ResourceSmart Schools Awards recognise and reward students and teachers from schools across Victoria who work hard to address a range of significant environmental issues. The awards, previously known as Waste Wise Schools Awards, highlight a decade of recognising the achievements of Victorian schools and their initiatives in working towards a sustainable future.

Entries were open to all Victorian primary and secondary schools with 84 entries received from 54 schools.

Finalist schools had the chance to present at the ResourceSmart School Awards Ceremony at the MCG on Tuesday November 13, where students from across the state presented to other finalists their initiatives.

The Parliamentary Secretary for the Environment, Mr. Michael Crutchfield and sponsors presented the winning schools with their awards. A Case Study of the all the finalists schools was published and distributed.

The ResourceSmart Schools Awards winners for each category were:

- WasteSmart School of the year: winner – Berwick Fields Primary School
- WaterSmart School of the Year: winner – Environmental Neighbourhood Cluster (Williamstown High School, Williamstown North Primary school, Williamstown Primary School and Spotswood Primary)
- Biodiversity Smart School of the year: winner – Torquay Primary School
- EnergySmart School of the Year: winner – Eltham North Primary School)
- ResourceSmart Hero: winners – teachers – Lara Secondary College Team of teachers: Lyn Boyle, Faye Smith, Glenda Ward and Kacey Bowman; Students - Mount View Primary School Green Team
- ResourceSmart School of the Year – Croydon Hills Primary School

Rubbish Free Lunch

The Rubbish Free Lunch Challenge, a joint initiative of SV and the DEECD, encourages schools to enhance student understanding of how daily activities impact on the environment and provides information on the small steps everyone can take to reduce this impact. 2007 is the 10th anniversary of the Challenge. The Rubbish Free Lunch Challenge targets lunch rubbish and offers a curriculum-based solution to preventing rubbish and promoting healthy eating in schools.

The Hon Bronwyn Pike, Minister for Education, presented this year's awards at a special ceremony on Wednesday, 10 October at the ArtPlay in Birrarung Marr Park near Federation Square. Over 100 schools registered to participate in this event.

Sustainability Education Roundtables

SV in conjunction with DSE supported VAEE to re-activate the 'Roundtable' held in early November. Over 90 practitioners from all a diverse range of sectors attended this event. These included, government, local government, schools, tertiary and non government organisations. This approach created a forum for sustainability education practitioners from a range of sectors to come together to discuss what is effective EfS, network and collaborate to generate practical and viable recommendations for action going forward.

The Sustainables Challenge

The Sustainables Challenge program is an initiative of 'Our Environment Our Future-Sustainability Action Statement', 2006. This program commenced with a pilot in 2005 aimed at the school sector. DSE has managed this program to date, contracting the Gould Group to manage the program delivery to schools and Our Planet Enterprises to provide the Sustainables troupe, the performance group.

The program consists of a number of components including;

- Curriculum resources
- Professional development for teachers
- The Sustainables performance to schools.

Following discussions between DSE and SV it was agreed that SV will take responsibility for this program's continuation in 2008.

Higher Education & Training

This project aims to develop training courses and accreditation systems for Trades and professional people. Funding to do this is through the Victorian State Government and the National Framework for Energy Efficiency (NFEE). The development of the following courses are currently underway:

1. Electricians

A 'Course in Sustainable Electrical Energy' is ready for accreditation to be delivered to registered Electricians. Roll out of the program has begun with 8 courses being completed in Victoria by the end of November 2008, and another 8 scheduled for the first half of 2008. Courses are also being run in Queensland, NSW and Western Australia. An accreditation system for successful course participants is to be finalised by early 2008. Course has received very positive feedback and places are filling quickly.

2. HVAC (Heating, Ventilation and Air Conditioning)

A short course in Energy Efficient HVAC Systems has been developed for designers, installers, commissioners and maintainers of HVAC and has been piloted in Melbourne and Queensland. Work is still continuing on the development of a Graduate Certificate in HVAC (Energy Efficiency) due to be piloted in February 2008.

3. Facility Managers

A Graduate Certificate course and a short course are being developed for Facility Managers. A scoping exercise is currently underway to determine course content. The program is due to be piloted during 2008.

4. Building Energy Analysis Professionals

A Graduate Certificate in Building Energy Analysis is currently being developed for commercial designers using computer modelling software. The course is currently in the design phase and due to be piloted early 2008.

5. Home Sustainability Assessors

A course has been developed for the new industry of Home Assessors to provide advice to householders on their energy, water and materials use. The course is 80 hours in length and is to be piloted in Melbourne in December 2007.

6. Scoping of Engineering courses

A survey of lecturers and students within engineering courses across Australian universities has now been completed, with 36 Engineering schools of a possible 45 responding. The survey is designed to identify what is currently being delivered in terms of energy efficiency and what gaps exist. An analysis of results is to be completed by December 2007.

7. Energy Professional Learning Program for schools. To be highlighted at meeting

The Training and Accreditation Implementation group of NFEE (National Framework for Energy Efficiency) has been requested to project manage the development of a professional learning program for primary and secondary schools. A paper is being prepared to be forwarded to MCEEYTA for their information and seeking their support. This program has been identified as a high priority after extensive research in all states and territories was conducted on behalf of the Consumer Information Implementation Working Group of NFEE by the Curriculum Corporation. This work resulted in a report including recommendations for developing energy efficiency education in schools. If this project proceeds SV will manage the development and delivery of this project on behalf of NFEE.

Department of Education and Early Childhood Development

Schools Sector:

1. AuSSI Vic Initiative

- Participation in the Australian Sustainable Schools Initiative, Victoria (AuSSI, Vic) since 2003 – 714
- Current active participation in developing core or resource modules – 391
- Current schools certified with 5* rating - 31

2. New Initiatives

TREES: this CD tool provides schools with the ability to measure its energy consumption and implement energy efficiency actions, with significant

financial, energy and greenhouse savings – the CD was sent out to all schools in October 2007.

Infrastructure projects:

- Maintenance Top-up Project: this project input additional financial resources for the School Maintenance Program (SMP) to ensure more energy efficient options. Additionally, all schools undergoing major heating upgrades are now required to carry out an energy audit.
- Review of Standards in the Building Quality Standards Handbook (BQSH) map against the Green Star Education Rating Tool: The Ecological Sustainable Development (ESD) guidelines have been finalised and are in line with Green Star assessment tool for educational facilities. This tool will allow assessment of both new buildings and significant refurbishment projects.
- Application of the new BQSH standards (ESD Guidelines) to the roll out of the Tomorrow's Schools Today project: DEECD has had two projects out of six nationally accepted to form part of the pilot for the Green Star Education Tool.

3. **Continuing Initiatives**

The development and trialling by 31 December 2007 of three resources to support school implementation of AuSSI, Vic:

- A targeted training program made available to all community and business organisations, empowering them to be state-wide facilitators for the Australian Sustainable Schools Initiative, Victoria. Delivery of the training program has been outsourced and trialled with a consortium led by the VAEE. Finalisation of the program will result in the final draft of the AuSSI, Vic manual and training program.
- A checklist for schools about the effectiveness of their education for a sustainable environment to use as part of their School Plan review process every four years. The checklist was developed for the Department by a consortium led by the VAEE.
- The Department has outsourced the development of the Administrative Guidelines - Education for a Sustainable Environment to the VAEE. A draft has been developed and is currently being tested with organisations and schools. Additional information will be added through the Corporate Services Division and the Facilities Branch of the Office of Government School Education before completion.

4. **Evaluations**

Benchmarks for the state-wide roll-out of AuSSI, Vic are currently being established through the School Census. Data indicating trends in schools having Environmental Management Plans or policies and participation in

resource modules (water, waste, energy and biodiversity) is currently being gathered.

Further and Higher Education Sector

1. Continuing Initiatives

A specific training program for pre-service teachers, aligned with the training program for community and business organisations (See item 1 under schools - Continuing Initiatives). This program is designed to ensure ongoing promotion and support for the next generation of teachers in schools. Delivery of the training program has been outsourced with a consortium led by the VAAE and trialled with the ACU. A report on key success factors in its implementation are key outcomes of the trial.

Department: Primary Industries

Schools Sector

1. LandLearn

LandLearn provides a structure and support for Victorian schools to incorporate studies of sustainable agriculture and natural resource management into the curriculum.

2. Teaching and Learning Resources

Three new fieldwork resources are available to schools on CD. These are: Keep it Clean Fieldwork in the upper Yea Catchment (investigating water quality issues in the Toolangi area); Water and Food: Futures Thinking (investigating water use and management in the Lower Goulburn-Broken Catchment); and Salinity in an Urban Landscape (Salinity fieldwork at Braeside Park).

3. Professional Development

Student teachers and teachers wishing to integrate edible gardens into school curriculum have been the focus of Professional Development (PD) activities for Term 3 and 4 with over 800 teachers and student participating in our PD programs. In 2008 PD will focus on Biodiversity and Sustainable Land Management, Learning in the Garden and the Creating Sustainable Futures Program.

4. Partnerships

MOU with NSW DPI- LandLearn has signed a MOU with NSW DPI to adopt and adapt the LandLearn program. All the educational activities and professional development of primary industries education initiatives will be branded as LandLearn NSW.

In 2008 there will be a focus on linking students with scientists and science projects to engage them with real science and promote science as a career and future subject of choice.

Department of Sustainability and Environment – Portfolio update

Agency: Melbourne Water

1. Schools Sector

Young Watercare Grants. In October 07, more than \$60,000 was disbursed to 33 schools across Melbourne, for projects to help protect and improve local rivers and creeks. For the fifth year running, the grants of up to \$2000 per school were made available through this Melbourne Water / Landcare Australia's Junior Landcare partnership. Over the five years, a total of around \$250,000 has been provided to schools, for a range of stormwater and river health projects, water quality monitoring and whole school community awareness programs. All schools receive Melbourne Water stormwater / river health curriculum support and work closely with local Waterwatch coordinators.

Yarra River education. Under the Victorian Government's Yarra River Action Plan:

- By December 2007, 20 schools in the Yarra catchment will have received Melbourne Water grants to build raingardens to capture and treat polluted stormwater run-off from the schools before it reaches the river. A dedicated stormwater education program is integral to each raingarden installation, to extend the learnings across the whole school community. The projects provide hands-on education and involve students and their parents in practical things they can do to reduce pollution in the Yarra River.
- A new giant Yarra catchment educational floor map (jigsaw) has been produced, to engage students and the general community in Yarra river health education activities. The new resource will be promoted early in 2008.
- Yarra River Recovery school education days were held in three Yarra locations (upper, middle and lower), in partnership with Greening Australia.

Melbourne Water River Health Youth Conference. Following the successful inaugural Yarra River Youth Conference for 350 students and teachers, conducted in partnership with Firestarter Communications in June this year, planning has commenced for a similar event next year to cover all catchments in the Port Phillip and Westernport area. Again, Melbourne Water and Firestarter look forward to working with schools and other key stakeholders like Sustainability Vic, DSE, the Department of Education and Early Childhood Development, EPA, PPW CMA, local councils to raise awareness of important river health issues.

Water, the Environment and Climate Change educational posters. Two educational posters were produced in partnership with Education Age – *Our Yarra* super panorama poster (August 2007) and *Water – our vital resource* (National Water Week October 2007). These followed two other posters earlier in the year: *Inside the water cycle* (World Water Day March 2007) and *Water, the environment and climate change* (World Environment Day, June 2007). The material is available at www.education.theage.com.au

Edithvale-Seaford Wetlands Discovery Centre. Earlier this year, Melbourne Water received Federal Government approval and proceeded to finalise the centre's

schematic design and interpretive content and undertake geotechnical and cultural heritage investigations, required for town planning permit application to local council. Pending local council approval, and in line with the Federal Department of the Environment and Water Resources' recommendation that external construction is limited to autumn and winter months to accommodate migratory bird visits at other times, building is expected to commence in March 2008. Melbourne Water continues to work with a technical reference group of key local stakeholders, including local council, schools, environment, community and indigenous groups to ensure that the centre becomes a valued community asset.

Water Education Calendar. Over the past few months, Melbourne Water has worked with primary schools near the Eastern, Western and Winneke treatment plants to produce our 2008 calendar on the theme of *Our land of drought and flooding rains*. Primary students from 22 schools submitted their artwork for this engaging school engagement and education project, that is undertaken each year. Each month, viewers are directed to useful websites that educate the community about important water issues and encourage us all to work together to ensure a sustainable water future. Participating schools receive copies for their whole school community. Limited copies are available, by contacting Melbourne Water 131 722.

Secondary School Awards. For secondary schools near our major assets, we have again provided around \$6000 in Environmental Champion Awards grants to recognize the commitment of secondary students to environmental sustainability.

School education resources. Our dedicated education website melbournewater.com.au/education is being reviewed with the aim of ensuring that all resources clearly align with the new Victorian Essential Learnings Standards (VELS) framework and are easily accessible to teachers. The website includes useful online educational materials, including online multimedia interactives, for schools and the general community. We have also produced flood education curriculum resources (*Floods Explorer* online multimedia interactive and *Water Water Everywhere*, in collaboration with the Geography Teachers Association of Vic), are updating our Western and Eastern treatment plant educational virtual tours, the *Home Water Investigator* (in collaboration with retail water companies), and are finalizing the Port Phillip and Westernport online river health education kit.

MW education tours and open days. Our educational tours of key Melbourne Water sites, including Western, Eastern and Winneke treatment plants continued. Our annual community open days continued to be popular, with more than 1230 people visiting both Eastern and Western treatment plants this year. Special tours were conducted for Cultural and Linguistically Diverse (CALD) communities, including students from ethnic schools.

Stakeholder schools' programs support. During the period, Melbourne Water was pleased to support:

- the *Schools Rubbish Free Lunch Challenge* (a collaboration of the Department of Education and Early Childhood Development and Sustainability Vic) at Birrarung Marr in October 07
- Sustainability Vic's *ResourceSmart Schools Awards* day at the MCG in November 07

2. Business and Industry

Melbourne Water continued to support:

- the Master Builders Association of Vic to deliver *GreenLiving Builders: protecting our rivers and creeks* stormwater training workshops for members of the building industry. We also continued to support Keep Australia Beautiful Vic's *Clean Site* program, aimed at improving the environmental performance of residential construction activity. KABV conducted 100 site visits throughout the municipalities of Cardinia, Casey and Latrobe between July and September 07. Keeping our stormwater clean – a builders guide (Melbourne Water / EPA booklet) that was updated earlier this year has been widely distributed via these programs and also to interested local councils.
- Sustainable Gardening Australia to deliver *GreenGardeners: protecting our rivers and creeks stormwater training workshops* for professional landscape architects and gardeners. Ten GreenGardeners training courses were held between May and October 2007 across various local council areas, with nearly 360 gardeners attending the training this year. The project website www.greengardeners.com.au has averaged 382 visits per week, with many homeowners seeking the services of accredited GreenGardeners.

3. Further and Higher Education Sector

TAFE

Planning proceeded with the National Centre for Sustainability (NCS) at Swinburne TAFE for a pilot project to embed sustainability training in courses for domestic builders, under the national *Knowledge and Skills for Sustainability* Project.

Melbourne Water will fund this pilot project to be managed by NCS and conducted in collaboration with building industry organisations, the Building Commission, and RMIT's Centre for Design. The project will commence early next year and is expected to be completed by June 2008. Course materials developed will be made widely available to building industry training programs, via building industry organisations, the Building Commission and TAFE colleges.

Continuing Initiatives

The Sustainable Campus Group Project

The first Stage of the Sustainable Campus Group project has been completed and the next stage is under consideration. Stage 1 began what is intended to become a self-sustaining process for facilitating sustainability in higher and further education through:

- collaboration;
- partnerships;
- capacity building; and
- sharing information on practical, cost-effective measures.

The project is delivered through a partnership between education institutions, business and government. It is facilitated by the Monash Sustainability Institute and Maunsell and is funded by the Department of Sustainability and Environment, Sustainability Victoria and EPA Victoria.

It works by:

- initially engaging operational and academic staff and students in practical action, training, reporting and cultural change; and
- strategically using this engagement as a step towards building long-term, comprehensive, integrated change for sustainability across all main areas of institution activity including curriculum, research, operations and civic roles.

In Stage 1, eleven institutions with over 50 campuses made a formal and financial commitment and participated in sustainability training and reporting. These institutions educate more than 130,000 students and employ more than 17,000 staff.

The project established an annual Sector Environment Report which is apparently the first state-wide university and TAFE environment report in Australia.

It provided an avenue for DSE engagement with university Vice Chancellors that led to a presentation to the Victorian Vice Chancellors' Committee and agreement by the VCs to nominate representatives for a Higher Education Task Force to be auspiced by DSE.

A proposal for Stage 2 has been developed from the Stage 1 Project Review through discussions between DSE, SV, EPA, the Office of Training and Tertiary Education, MSI and Maunsell. Stage 2 is designed to:

- consolidate and extend membership of the Sustainable Campus Group from 11 to 25 institutions;
- refine and extend the initial facilitation, training and reporting processes;
- develop ways to optimise flow-on from initial engagement to effective change in curriculum and research activities; and
- provide multiplier effects with other projects in this sector including the Victorian Government's Resource Smart project and RMIT's Australian Research Council grant project on ways to embed sustainability across the curriculum.

4. Community

Melbourne Water continued to engage and educate the community (including schools) via:

- *Port Phillip and Westernport Waterwatch*. In 06-07, more than 40,000 people (including students) participated in 1000 Waterwatch activities, and water quality monitoring was conducted at more than 300 sites. Over 8000 more people participated in the program this year compared to 05-06
- *Frog Census*. The Spring 2007 census is under way, with community volunteers monitoring frog populations across the Port Phillip and Westernport region. Last financial year, there were 60 new participants, with 330 volunteers participating in this popular community engagement and river health education program that is conducted twice a year, in Spring and Autumn.
- *Active Catchment Education*. The ACE stormwater model continued its tours across school and community festivals.
- *Healthy Waterways* Guides badge. This new partnership with Guides Vic was launched on 3 June at the Dandenong region's celebration of

World Environment Day. More than 50 Girl Guides earned their first *Healthy Waterways* badge on the day by participating in a range of river health activities, including Waterwatch and tree planting with the local council. More than 2,200 guides are eligible to complete the badge, and are expected to share their learnings with their friends and family thus filtering key river health education into the broader community.

- *Melbourne Water Trail at Melbourne Zoo*. In October 2007, work was completed to improve our stormwater educational exhibit at Melbourne Zoo. The exhibit was opened last year, to complement the Zoo's new recycling plant that treats runoff from animal enclosures to provide recycled water for use at the site thus saving precious drinking water.
- *NGV Water Trail*. Melbourne Water and South East Water continue to work in partnership with the National Gallery of Victoria to provide water education through art to visitors to NGV

DSE Toolangi Forest Education Service (TFES)

Schools sector

1. Initiatives

2007 saw over 10,000 students using the forest service for fieldtrips, focusing on a range of programs: Water, Biodiversity, Forest History, Forest Management, Fire and Climate Change. These programs have been aligned to the Education Departments' VELs, with worksheets and post activity booklets available for use by students.

The Toolangi Forest Discovery Centre provides a venue for teacher PD's, departmental, community seminars and continued to host over 3000 tourists this year.

Presently the Education Service is producing programs to deliver AuSSI Vic outcomes using the modules, energy, waste, water and biodiversity and will seek accreditation for these in 2008.

The future priorities of the TFES will be to deliver DSE behaviour and climate change values, taking into account the topical bushfire issues relating to increased temperature and weather patterns.

2. Evaluations

2007 saw trials of questionnaires relating to Environmental Education. The Toolangi Forest Education Service will update evaluation tools and work on ways to measure students' long term behaviour change.

Agency: EPA Victoria

Schools Sector

1. Continuing Initiatives

Competitions:

2007 Ecological Footprint Banner competition:

This competition is now completed for 2007. A great response to this competition with over 150 banners (1mx2m portrait view) entered from regional and metropolitan schools with clear messages about ways reduce our Ecological Footprint and our impact on the environment.

View the 19 finalists at http://www.epa.vic.gov.au/students/banner_competition.asp

2007 EPA Calendar competition:

Annual competition for primary and secondary schools.

Students submit A4 hand drawn artwork based on a selected theme. The theme for the 2007 competition (and 2008 Calendar) is Air Pollution.

The calendar campaign provides information to the community based around a suggested yearly EPA theme - litter, beach water quality, stormwater etc The end result of the campaign is the production of the yearly EPA Calendar.

Results will be announced early December at

<http://www.epa.vic.gov.au/students/competition.asp>

School resources:

EPA continued to provide a range of school resources to the school sector during 2007 including AirWatch resource manuals, professional development sessions for VCE teachers supported by specialised equipment, and teacher PD and student incursions on ecological footprint and air quality.

At the end of 2007 EPA will cease their support of schools with these resources.

AirWatch manuals will be available on the EPA website.

Business and Industry

1. New Initiatives

Environment Resource Efficiency Plans:

<http://www.epa.vic.gov.au/bus/erep/default.asp>

The Environment and Resource Efficiency Plans (EREP) program is a new regulatory scheme that will apply to Victoria's largest industrial and commercial users of energy and water. Sites will be required to assess their environmental resource use and waste generation, develop an action plan and report on implementation of the plan

EREP will apply to all large energy and water consumers who exceed consumption thresholds that will be established in Regulations. Participants will be required to register with EPA, assess their resource use and waste generation, develop an action plan, to improve resource efficiency and report on implementation.

An EREP will focus on identifying and pursuing financially beneficial actions for environmental resource use efficiency. An EREP will consist of actions that pay for themselves within three years, providing strong financial returns for businesses.

Public Information Seminars designed to facilitate feedback on the draft EREP documents were held throughout Victoria from 26 September to 5 October 2007. The Information Seminars provided an overview of the EREP legislation, its key elements and the timeframe from the public comment period, to completion of the EREP Regulations and RIS, through to registration and implementation. Attendees were provided with information on how to provide feedback on the draft Regulations and RIS. A summary of what to expect from the EPA in relation to EREP over the next 6 months was also provided during the seminars.

Guest speakers from companies that had successfully worked through a resource efficiency program provided attendees with a real life example of their experience with environmental action planning and implementation. This included both the challenges and the benefits for their particular organisation and the environment. After close of formal proceedings EPA staff were available to discuss further case studies and to answer questions that attendees had raised.

2. Continuing Initiatives

Grow me the money:

Grow Me The Money is a joint initiative of VECCI and EPA Victoria designed to improve the environmental impact of Victorian businesses. Businesses can sign up to the program and take a lead in establishing and tracking their sustainable business practices. The program is targeted at SME's but there is something for everyone. The program has sought strategic partners to the program with the signing of the Victorian Sustainability Accord. The accord partners direct the program and agree to assist by the aggregation of existing work. This assists in enabling a platform of scalability and relevance for all Victorian businesses. The website (including fully functional live portal), helpline, rewards and recognition program, mentor framework, skills bank and associated advertising campaign represent the core of the program that Victorian small and medium sized businesses will be able to access. The program launched in April 2007, and is self sustaining and ongoing.

Carbon Innovators Network:

Climate change is a critical issue that can only be addressed through innovation and collaboration. EPA Victoria has been approached by a number of businesses for support and advice on climate change. In response, EPA has established the Carbon Innovators Network – a network for business leaders and climate change experts. EPA will help organisations strategically and practically address their carbon emissions, and in doing so transform climate change from a business cost to a business opportunity. EPA wants to stimulate debate and innovation in carbon management and provide the support and tools businesses require to develop appropriate carbon management strategies. Network members will have a variety of interests and experience. Where members see value in their involvement, EPA would like them to:

- Participate in discussions on business management issues related to climate change;
- Provide feedback to EPA on proposed tools and resources; and
- Make recommendations regarding initiatives – forums, training, tools, guidance – that members would like EPA to undertake.

Community

1. Ongoing Initiatives

Australian Greenhouse Calculator Upgrade:

The Australian Greenhouse Calculator (AGC) is a program that calculates household yearly greenhouse gas emissions based on information provided by the user. The AGC is a 'predictor' calculator that compares household greenhouse emissions with that of a 'typical' house and a 'green' house. The AGC aims to educate the Victorian

community about their household greenhouse gas emissions and to raise awareness about practical ways to reduce greenhouse emissions . The current version of the AGC is in cd-rom format with limited web access, and also includes a range of resources - animations on the greenhouse effect, summer and winter smog and the carbon cycle and student activities and worksheets. Upgrade of the calculator will incorporate new algorithms and content and the complete calculator version on the EPA website.

State: Western Australia

Department: Department of Education and Training (DET)

Schools Sector

Sustainable Schools Initiative

- The ongoing rollout of AuSSI-WA professional learning ('Making the Connections' (MTC)) has established 123 'participating schools' via this 'entry point' (as listed per the project website).
- A further 46 schools are now participating in AuSSI-WA via the Solar Schools Program 'entry point'. An MOU between DET/AuSSI-WA and the Sustainable Energy Development Office has been drafted to consolidate and enhance the associated educational support provided to schools linked to this partnership.
- The process of integration of AuSSI-WA / MTC with other respective programs such as DEC's Waste Wise Schools Program is well underway, and will pave the way for schools to formally register with AuSSI-WA through these various 'entry points' (with associated processes). Mapping of respective program activity to the 3 key AuSSI-WA assessment, planning & evaluation tools means schools can readily identify where their participation in different programs fits within the AuSSI-WA whole-school planning framework.
- The project website www.sustainableschools.wa.edu.au continues to be enhanced, and additional case studies are currently being posted from schools that participated in the '06/07 rollouts. The complete AuSSI-WA toolkit as supplied (electronically) to all participating schools will be placed on the project website shortly, including 'ecological footprint' and 'social handprint' tools that are currently being developed as interactive, on-line resources.
- The integration of AuSSI-WA as a teaching resource within the new K-10 Syllabuses will ensure effective promotion of the Initiative to all school communities in 2008 and the incorporation of sustainability into teaching programs across the learning areas. The AuSSI-WA resource is explicitly referenced in, and linked to, the Society and Environment learning area, and explicitly linked to the Science and Technology & Enterprise learning areas. Sustainability as a key 'lens' through which to view curriculum was promoted at a Directorate Planning Day in October, and this should further enhance the promotion of, and engagement of schools with, AuSSI-WA.
- Our second annual EfS Celebration was a resounding success thanks to the collaborative efforts of all (in particular the DEC team who coordinated the event). Ministers for Education and Training and Environment and Climate Change attended the event, offering that all-important 'higher level' support.
- An ARC grant proposal focusing on ways to enhance the AuSSI-WA framework and further support school and community capacity building in WA will be re-submitted in the first round, 2008.

New Initiatives

To support AuSSI the Department of Environment and Conservation is preparing a new resource 'A Guide to Environmental Education/Learning for Sustainability'. The guide will help 'new' teachers include environmental issues into their programs and will include information about environmental issues including climate change, resource consumption, waste management, air and water quality and biodiversity protection. The guide will include student activities and curriculum maps. It will also guide teachers to AuSSI and DEC's environmental education programs.

Continuing Initiatives

- Syllabuses that support teaching and learning in WA schools are close to completion. The teaching of Education for Sustainability (currently expressed as a desirable outcome within the existing WA Curriculum Framework) is further supported by the Syllabus documents' essential content sections. These sections articulate the knowledge, skills and values that should be taught in each Learning Area to enable students to achieve the Learning area Outcomes.

Community sector:

New Initiatives

Community Education and Involvement – Household Sustainability Audit and Education Program – DEC/DPI

Funding has been provided through the Premier's 'Statement for Climate Change' for the development of a large scale trial that will build on existing Government, Local Government and NGO programs that aim to reduce householder's environmental impact through education/involvement.

The trial will provide an integrated education and information program addressing a range of climate change factors including, energy, water, waste and transport. The program will focus on what members of the public can do to reduce emissions at the household level.

As part of the program personal contact will be made with households in the Cities of Joondalup and Mandurah, individualised information packs will be provided and residents will be offered free home audits. The audits will identify a range of opportunities to reduce emissions and energy costs, while also identifying waste, water and transport savings. A free energy and water savings kit will be provided to each home participating in the audit, including energy efficient light bulbs and water saving devices.

The program will be linked to the State Government's 'Act Now For The Future' common branding initiative and advertising campaign which will raise awareness of, and assist with recruitment of households to the trial. The program will also be linked to the WaterSmart, TravelSmart and Energy Actions programs to build upon the community capacity and behaviour change being achieved through information and education on demand management.

The trial will involve 15 000 households in the 2007/08 and 2008/09 financial years.

For 15 000 households, it is anticipated that the trial will deliver a total lifecycle reduction of over 500 000 tonnes of CO₂e at a Government cost of about \$3.00 per tonne. Water and Energy savings are also expected to be significant, offsetting future need for government capital investment in supply infrastructure.

Evaluation will be conducted through the measurement of water and electricity meter readings for the target households and for control groups. SmartMeter technology will also be deployed as part of the monitoring strategy and (with control) to provide a demand management tool for households.

Climate Change Behaviour Change Initiative – DEC

A new initiative is currently being developed by the Community Education Branch on behalf of the Office of Climate Change tentatively titled ‘100 Days of Climate Change’.

“100 Days Of Change” Framework.

Two key ideas drove the development of this initiative. The first was that to capture the communities attention we should have a short duration intense program rather than one over an entire year. The second was a concept suggested by Perth’s recent ‘thinker in residence’, Charles Landry, for making Perth more interesting of a 1000 day program based on “One concept, 10 big ideas, 100 small ideas in 1000 days”.

With the ACT NOW FOR THE FUTURE’ campaign already in existence but not widely recognised this initiative aims to expand this campaign.

The Framework

The following elements form the basic framework for the development process.

Broad Focus: The intent is to effect change within the homes, businesses and schools.

Web Portal: The ‘ACT NOW’ (www.actnow.wa.gov.a) web portal will be the website for the initiative (if required) and can be redesigned as necessary.

Media: The various public media will be contracted to advertise/promote the initiative directly but it is intended that they will also cooperate in an ‘in kind’ way to support the initiative through such things as news stories, mini carbon cops type programs, short documentaries, how to programs etc..

Schools: Schools are to be engaged initially through opportunities to be involved directly in the 100 day event. It is envisaged that this will spurn CC related activities in the schools leading up to and during the 100 days. To help pull schools into being involved it has been suggested that some “Climate Change Champion Students” be selected state wide to inspire both school and community action. General support materials for engaged schools along with curriculum materials will be developed as necessary to support this involvement.

Timing: The program will take to form of a short duration ‘event’ such as 100 days. It is proposed to deliver the program in the summer of 2009 (Feb/March/April) when electricity use by homes will be at a maximum and effects actions will have an opportunity to create the greatest noticeable effect.

Wide Ranging Involvement and Engagement

It is envisaged that as many existing climate change related businesses, education programs, state and local government initiatives, community groups, will be directly involved in the 100 day event or at a minimum use it to leverage their own initiatives/products.

To achieve this goal it is proposed to use a collaborative process to develop the specifics of the event engaging as many interested parties as possible. In this way the DEC “100 day” team will provide a coordinating role, collecting ideas and maximising opportunities for synergies between involved groups/agencies. It is envisaged therefore that the final initiative will combine existing initiatives in way that ensures “*the whole will be greater than the sum of the individual parts*”.

Ensuring Best Practice

In addition to the involvement/engagement of interested parties recognised experts in several fields will be also engaged to ensure that what is developed is as innovative but also adheres as closely as possible to current best practice. Some of the experts to be engaged will include

- Existing Environmental and Climate Change Educators
- Recognised and Experienced Behaviour Change Experts
- Recognised creative thinkers
- Experienced Program Developers
- Marketing experts
- Community Engagement Experts
- Business leaders
- State and Local Government agency leaders

Background Research

In the first three months the following research has been undertaken to gather background on current best practice in behaviour change and climate change education in WA, Australia and abroad:

1. Research and create a comprehensive list and basic overview of all the climate change related programs already in WA.
2. Reviewed books, articles, papers etc on behaviour change in general and climate change specifically looking for learning’s in relation to best practice behaviour change to incorporate into our initiative.
3. Researched and graphed the emissions sources for WA and Australia to see what the key target areas for mitigation might be.
4. Began creating a summary document of the key aspects of a best practice behaviour change program as related to a large event.
5. Case studied key local, national and international behaviour change programs specifically targeting how they did it and the behaviour change learning’s from each.

Stakeholder consultation

In addition to this research 70 Perth people who are currently involved in Climate Change education (or related work) in WA were invited to a 2 hour “world café” workshop with an aim to:

- Asses what barriers to change are being experienced in the Perth general community and businesses.
- Develop a list of the key aspects of a good behaviour change program.
- Find out how existing educators could be involved in a State Government based climate change education initiative/program and how interested they were in being involved.

Over 25 people attended the workshop and output from it was communicated to all invitees and attendees by email shortly after.

Guiding principles

To help decide on a direction to take an overall assessment of the climate change education situation in Perth was made. The key aspects of this were:

- The majority of the community are aware of and convinced that climate change is real and are looking for some leadership from government on what to do about it.
- There is no existing community based climate change initiative in WA at present. The CCP program has engaged many local councils but it has mainly focussed on corporate/council emissions not those from the community.
- Climate change education/behaviour change is currently being addressed through active environmental group campaigns (eg: ACF) , a plethora of websites with top ten things you can do, household audits, and a number of small but innovative community based programs.
- Changing ones behaviour to address personal contribution to climate change is nowhere near a social norm as yet.
- Changing behaviours around climate change related issues is proving difficult at present.
- Community Based Social Marketing seems to be the most effective behaviour change technique currently being used.
- Climate Change is currently a serious political issue.